

FT-736R

TECHNICAL SUPPLEMENT

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FT-736R TECHNICAL SUPPLEMENT



This manual is intended to serve as a supplement to the FT-736R Operating Manual. Detailed information regarding functions, installation, interconnections and operation has been provided in the Operating Manual, and is not reprinted herein. Therefore, this supplement is not intended to serve as an independent reference, but to be used in conjunction with the information provided in the Operating Manual.

Because there are nearly five hundred semiconductor devices in the FT-736R, circuit description information is provided in the form of numerous block diagrams. We hope that this manner of providing functional information proves to be more convenient for the owner and technician than would a lengthy verbal description. Those readers unfamiliar with the basic types of analog and digital circuits that serve as the building blocks of the FT-736R are encouraged to study instructional material, such as that provided in handbooks on amateur radio and digital circuit design, before attempting to understand the design of the FT-736R. Each block in the block diagrams represents one such basic circuit, while the Component Applications List provides additional details for each semiconductor. General information on integrated circuits and their applications is available in the data provided by the IC manufacturers. Specific circuit details are provided in the schematic diagrams in this manual.

While we believe the technical information in this manual is correct, Yaesu assumes no liability for damage that may occur as a result of typographical or other errors that may be present. Your cooperation in pointing out any inconsistencies in the technical information would be appreciated.

Yaesu Musen reserves the right to make changes in the circuitry of this transceiver, in the interest of technological improvement, without obligation to notify owners or to modify any sets produced prior to the modification.

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CIRCUIT BOARD ACCESS

TOP COVER

The following units (pcb's) are accessed by removing the top cover:

- TX Unit
- 144 MHz Main Unit
- 144 & 430 MHz PA Units
- 430 MHz PLL Unit
- 430 MHz RF Unit
- 430 MHz Front End Unit
- AF Unit
- Protector Unit
- $\frac{1}{2}$ of RX Unit

To remove the top cover, remove the eight screws (4 each marked "★" or "※") in Figure 1). Then lift the cover off slowly so as not to stress the loudspeaker wires. Unplug these wires from J3016 on the RX Unit before pulling the cover away.

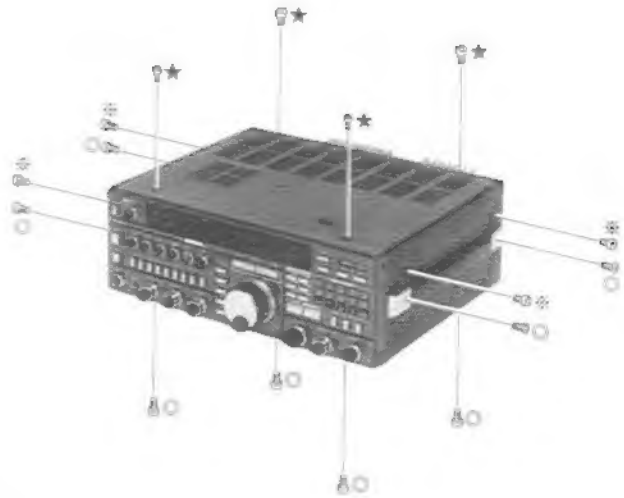


Figure 1

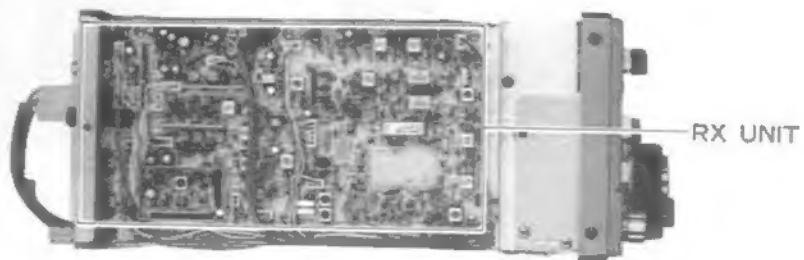


Figure 2

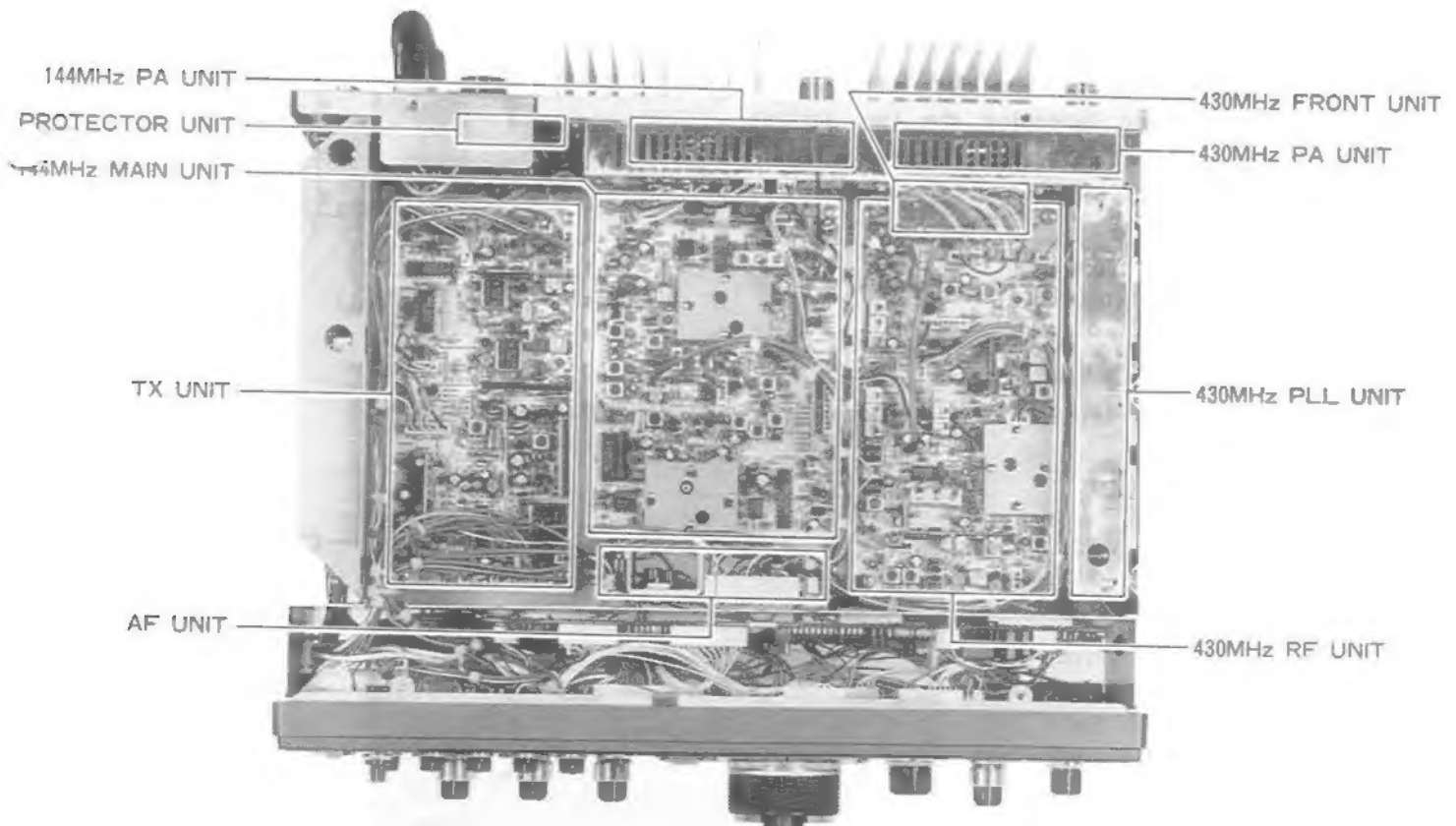


Figure 3

CIRCUIT BOARD ACCESS

BOTTOM COVER

Removing the bottom cover exposes the following units:

- Power Supply Unit
- Reg Unit
- Optional Band Modules
- $\frac{1}{2}$ of RX Unit

To remove the bottom cover, remove the twelve screws (4 marked "※" and 8 marked "◎") in Figure 1).

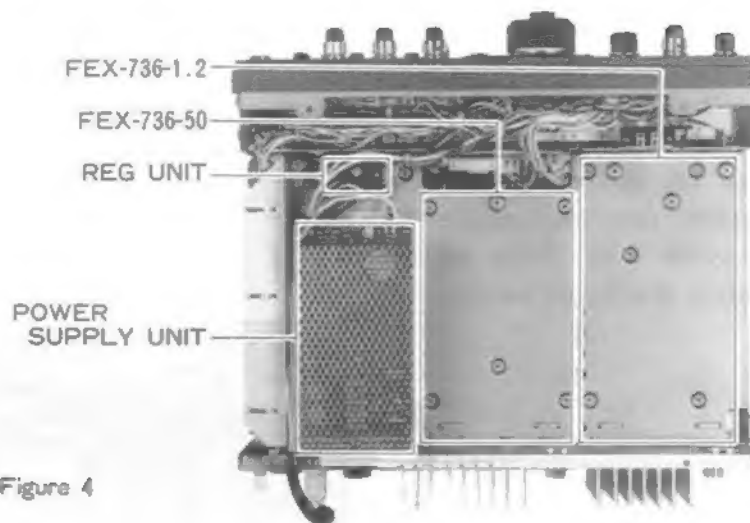


Figure 4

FRONT PANEL HINGE

When the top and bottom covers have been removed, the front can be slid forward and folded down after loosening the two screws on either side, shown in Figure 5. This provides access to the following boards:

- Control Unit
- Display Unit
- VR-A, -B, -C and -D Units
- SW-A, -B and -C Unit
- Encoder Unit

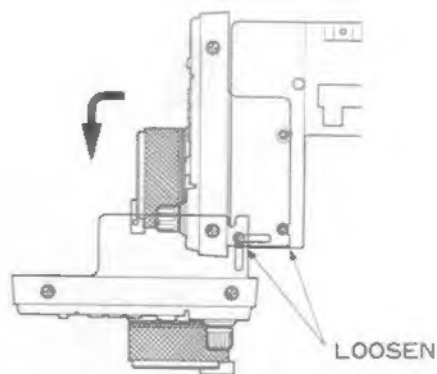
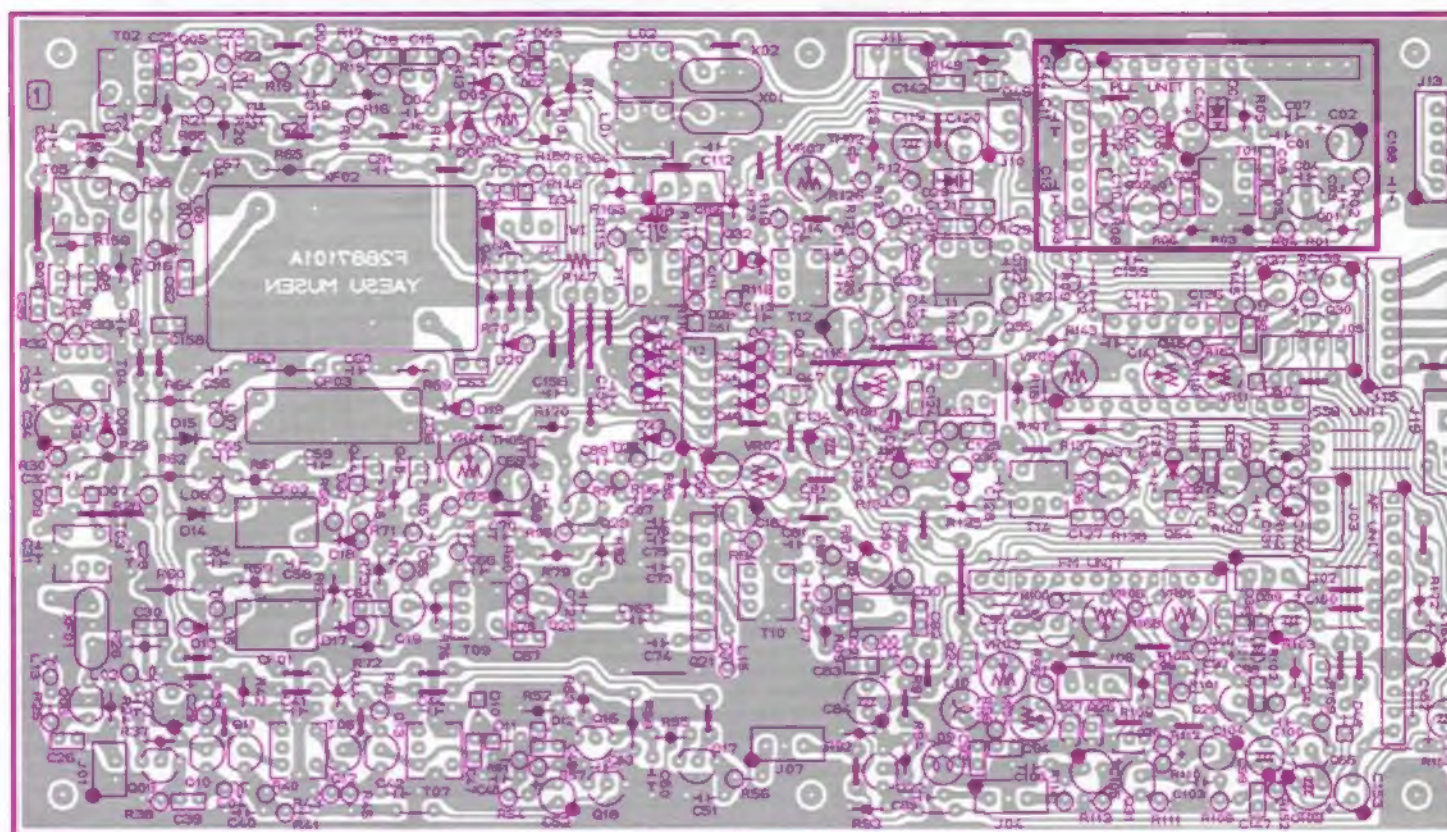


Figure 5

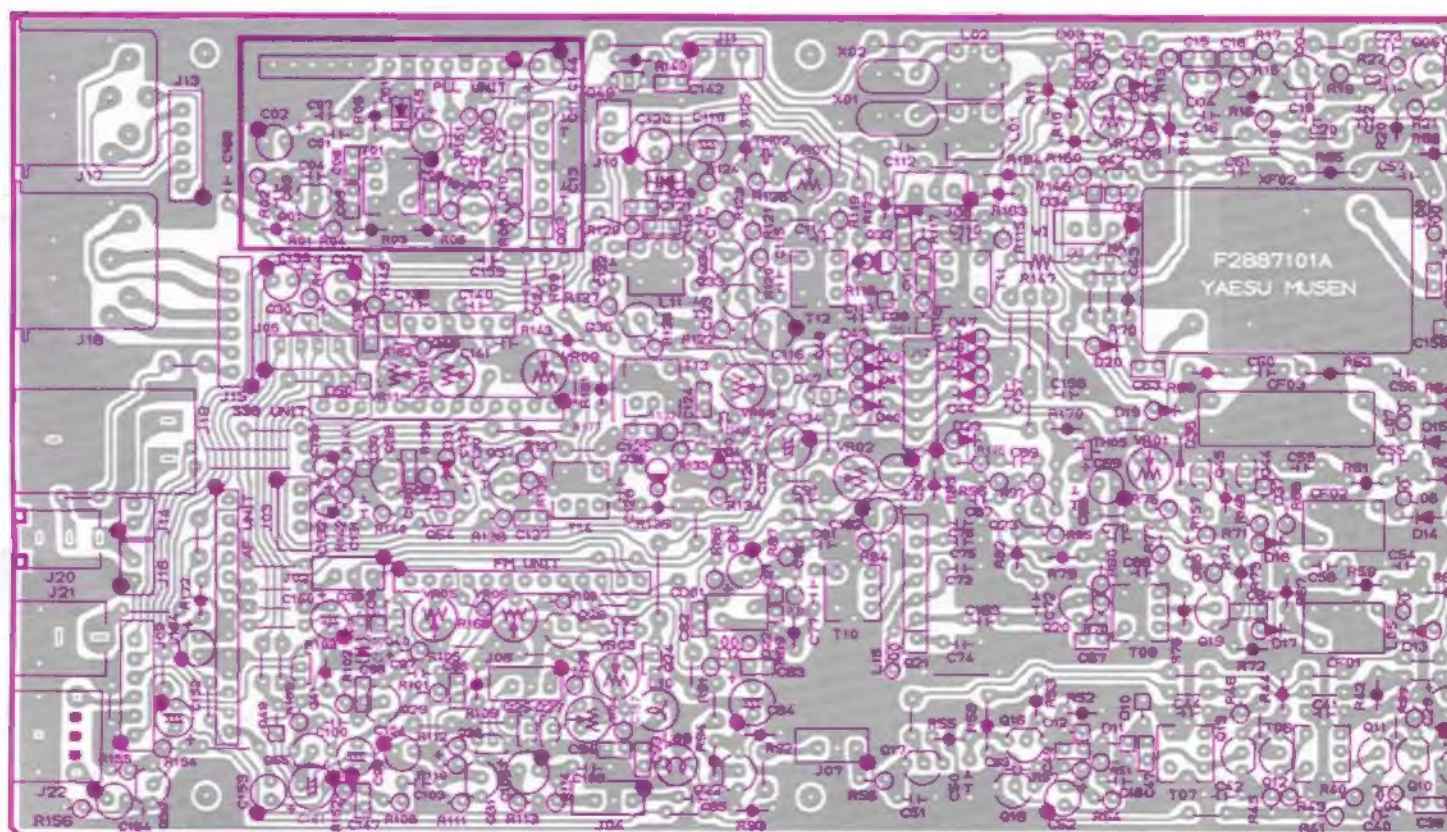


Figure 6

RX UNIT (No. 3XXX)

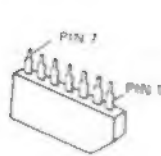


Component side

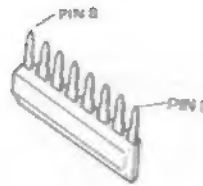


Component side

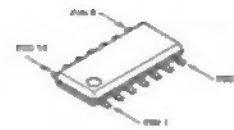
RX UNIT PARTS LAYOUT



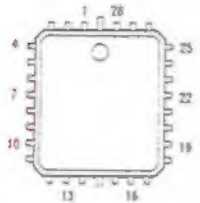
μPC1037H(Q3003,3046)



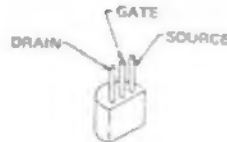
μPC577H(Q3021)



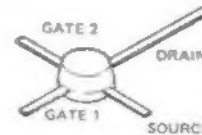
LA6324M(Q9301,9401)



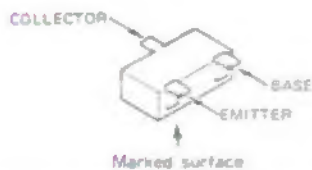
MC145163SL(Q9801)



2SK125(Q3006)



3SK74L(Q3032,3036)



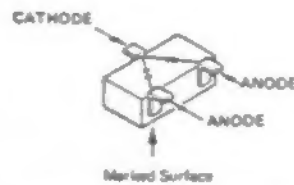
2SC2619F(FB) (Q9802,9803)

2SC2712GR(LG)

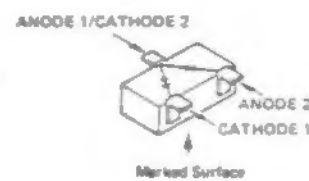
(Q9001,9003,9005)

FA1A4M(L33) (Q9402,9403)

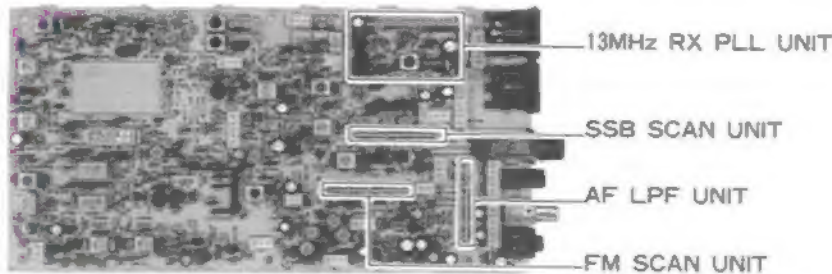
FA1F4N(L35) (Q9002,9004)



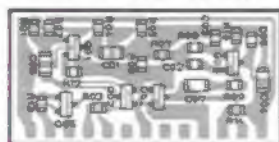
1SS184(B3) (Q9301,9401)



1SS226(C3) (Q9302)



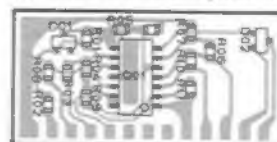
AF LPF UNIT (No.90XX)



① ④ ⑦ ⑩ ⑬

Solder side (obverse)

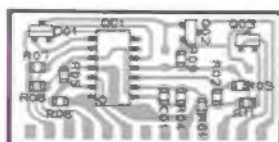
SSB SCAN UNIT (No. 93XX)



① ④ ⑦ ⑩ ⑬

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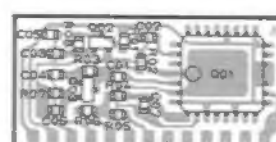
FM SCAN UNIT (No. 94XX)



① ④ ⑦ ⑩ ⑬

Solder side (obverse)

13MHz RX PLL UNIT (No. 98XX)



① ④ ⑦ ⑩ ⑬

Solder side (obverse)

S)

/MIN

SIG.)

SIG.)

SIG.)

CW

V

V-N

V-N

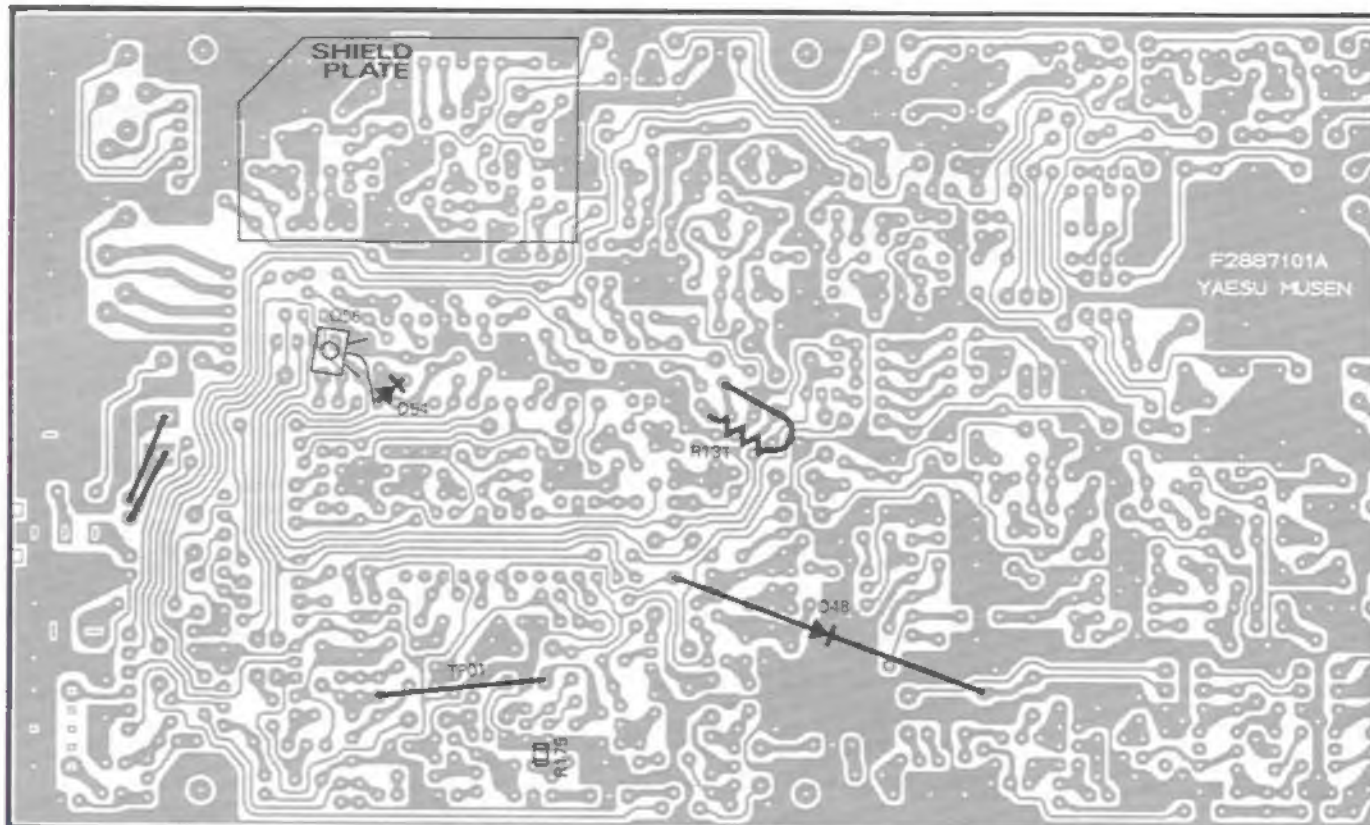
F

F

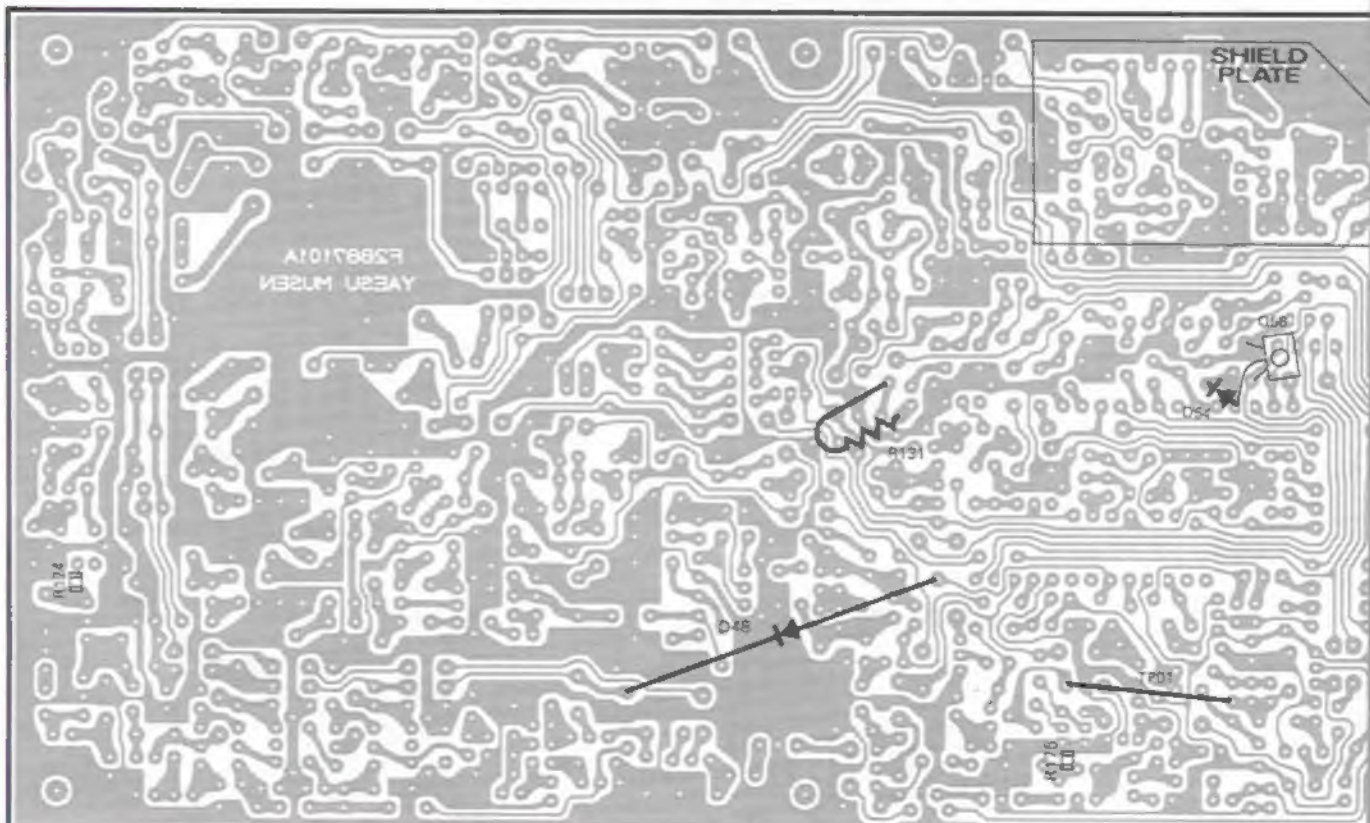
(obverse)

(reverse)

RX UNIT PARTS LAYOUT



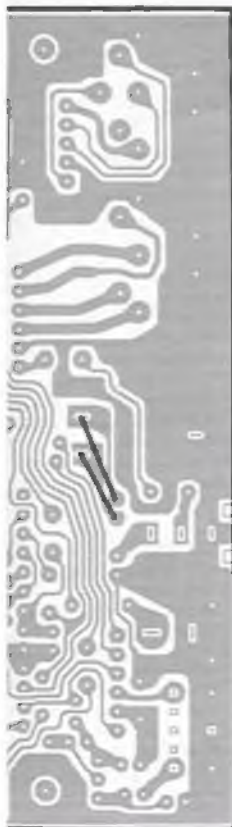
Component



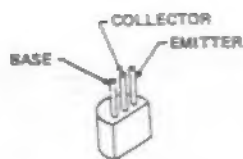
Component



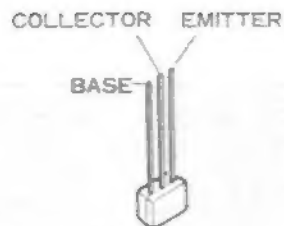
Obverse side (obverse)



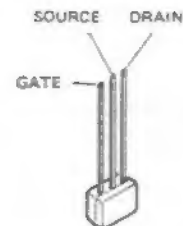
Reverse side (reverse)



2SA460B(Q3002,3044)
 2SA733AP(Q3055)
 2SC458C
 (Q3010-3013,3016-3018)
 3020,3022,3023,3028
 3029,3031,3033-3035
 3037-3039
 2SC535B
 (Q3001,3005,3009,3019)



BA1A4M(Q3030)
 BA1A4P
 (Q3024-3027,3040,3041)
 3054,3056
 BA1L4L
 (Q3042-3045)
 BN1A4P(Q3047,3048)



2SK241GR
 (Q3007,3008,3049)

RX UNIT VOLTAGE CHART

(DC VOLTS)

	E(S)	C(D)	(G ₁) ^B	(G ₂)	REMARKS		E(S)	C(D)	(G ₁) ^B	(G ₂)	REMARKS
Q3001	3.06	7.60	3.70			Q3029	0.03	0.02	0.02		FM
Q3002	3.6	1.30	2.00			Q3030	0	4.0/0	0/6.7		FM SOLVR MAX/MIN
Q3004	3.0	7.80	3.60			Q3031	0.84	3.60	1.49		FM
Q3005	0.67	7.60	1.40			Q3032	0.75	6.65	0.85	2.45	SSB-CW (No SIG.)
Q3006	0	7.70	1.20			Q3033	4.50	7.60	5.10		SSB-CW
Q3007	0.85	7.60				Q3034	4.50	6.10	5.00		SSB-CW
Q3008	0.85	7.60				Q3035	4.00	7.60	4.65		SSB-CW
Q3009	3.42	7.50	3.48			Q3036	0.75	6.70	0.84	2.42	SSB-CW (No SIG.)
Q3010	1.95	7.50	2.60			Q3037	4.70	7.65	5.30		SSB-CW
Q3011	1.95	7.50	2.60			Q3038	0	2.43	0.05		SSB-CW (No SIG.)
Q3012	1.95	7.60	2.60			Q3039	3.0	7.7	3.7		
Q3013	1.95	7.60	2.60			Q3040	0	0	7.5		
Q3016	0	7.8/0			NB ON/OFF	Q3041	0	0.01	4.77		
Q3017	0	4.45				Q3042	0	7.80/0.06	0.06/5.10		CW-N / CW-N
Q3018	0	5.30	0.28			Q3043	0	7.80/0.06	0.06/5.10		SSB-CW / SSB-CW
Q3019	1.16	7.70	1.83		FM	Q3044	0	7.80/0.06	0.06/5.20		FM-N / FM-N
Q3020	0	3.75	0.68		FM	Q3045	0	7.80/0.06	0.06/2.70		FM-W / FM-W
Q3022	1.40	7.70	2.02		FM	Q3047	7.86	7.71/0.01	0.06/7.82		FM FM-N / FM-FM-N
Q3023	0.30	2.80	1.00		FM	Q3048	7.86	0.08/7.52	7.83/0.80		FM FM-N / FM-FM-N
Q3024	0	0	2.20/0		FM / FM	Q3049	0	3.14	0		
Q3025	0	0.01	4.76		FM	Q3054	0	0.01/0.04	4.84/0.01		MUTE ON/OFF
Q3026	0	0.02	4.76		FM	Q3055	7.50	0.07	7.45		FM
Q3027	0	0.02	0.01		FM	Q3056	0	0.10/1.63	4.84/0.01		MUTE ON/OFF
Q3028	0	0.02	0.02		FM						

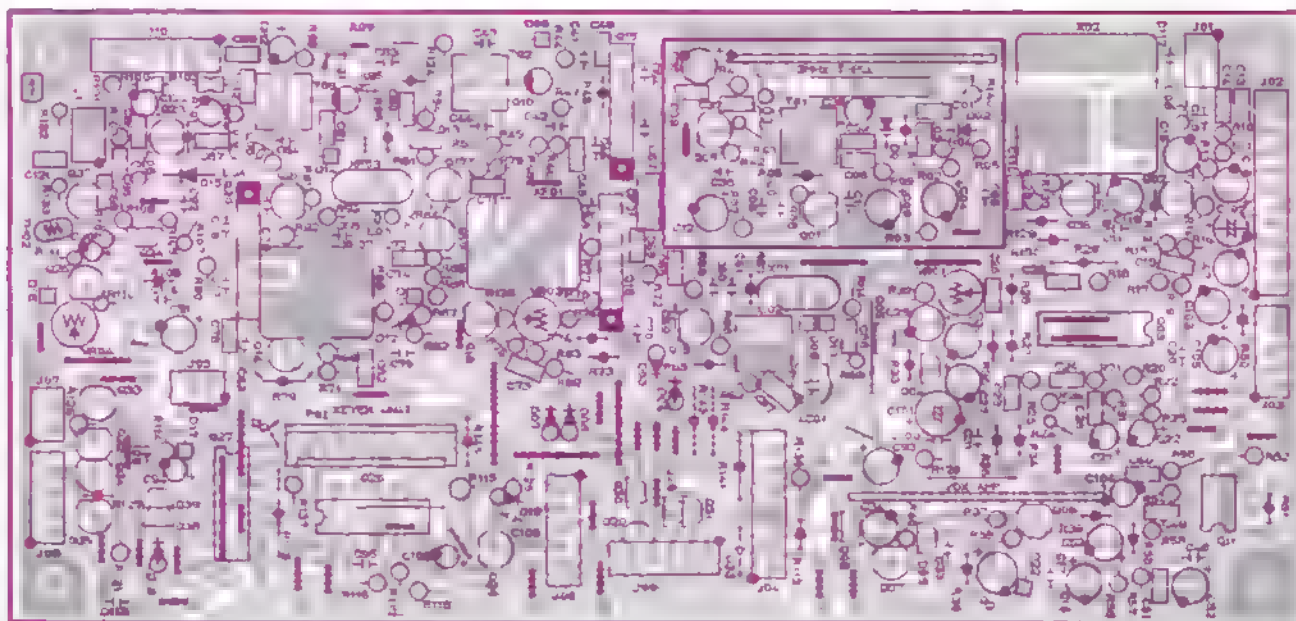
RX UNIT IC VOLTAGE CHART

(DC VOLTS)

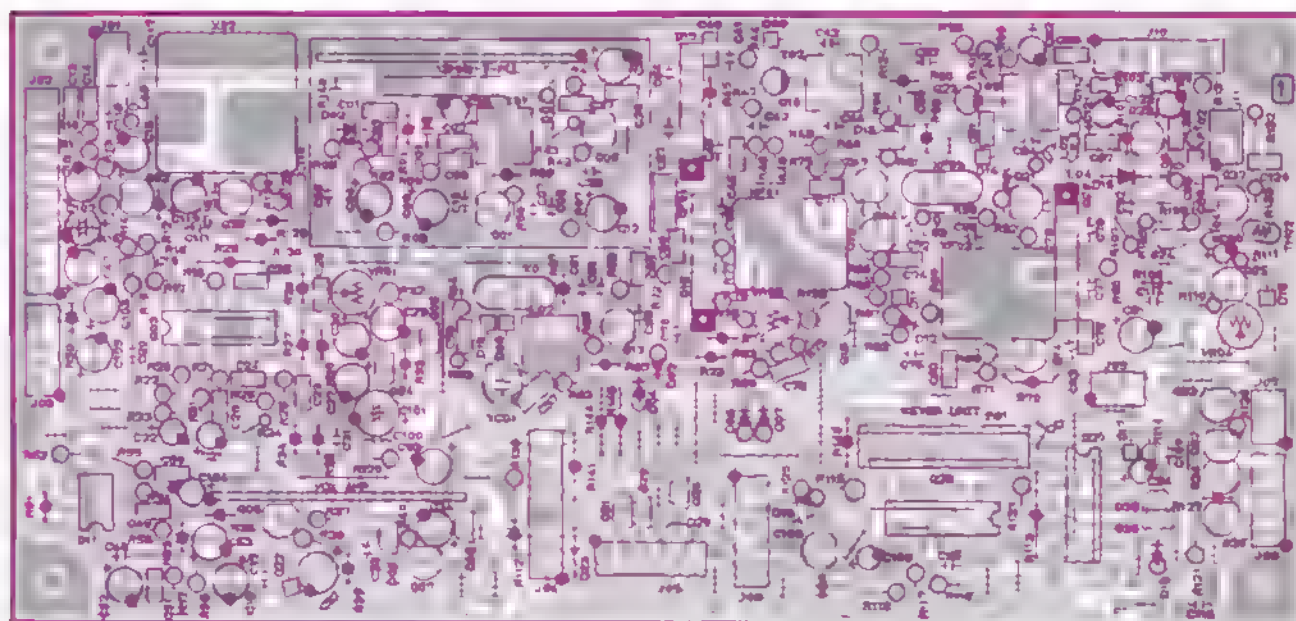
	1	2	3	4	5	6	7	REMARKS
Q3003	7.00	6.15	—	0	3.11	3.11	3.11	
Q3021	5.10	1.90	1.90	0	7.60	2.80	7.00	FM
Q3046	6.94	6.09	—	0	3.07	3.07	3.07	

TX UNIT PARTS LAYOUT

TX UNIT (No. 4XXX)



Component side (obverse)

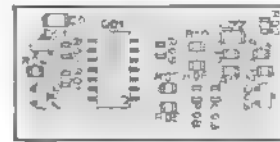
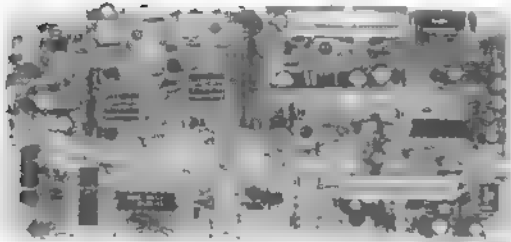


Component side (reverse)

13MHz TX PLL UNIT

13MHz TX PLL UNIT
(No. 97XX)

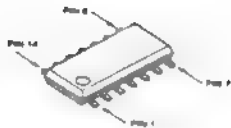
VOX AMP UNIT
(No. 99XX)



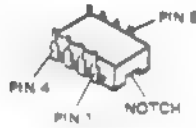
VOX AMP UNIT

① ④ ⑦ ⑩ ⑬
Solder side (obverse)

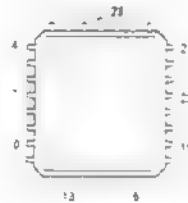
① ④ ⑦ ⑩ ⑬
Solder side (obverse)



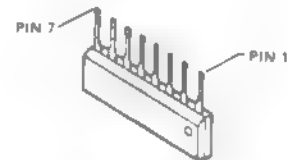
LA6324M(Q9901)



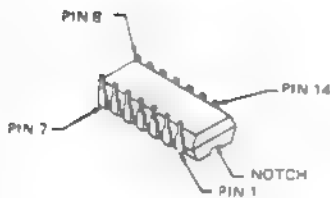
LA6358(Q4011)



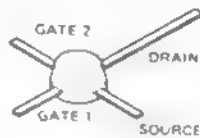
MC145163SL(Q9701)



μPC1037H
(Q4015,4016,4020)

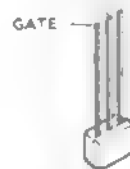


LA6324(Q4003)
μPD4001BC(Q4026)
μPD4011BC(Q4027)

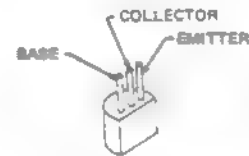


3SK74L(Q4010,4022)

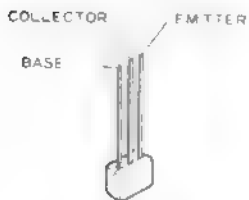
SOURCE DRAIN



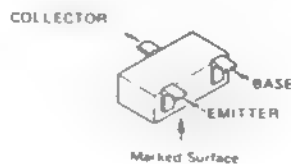
2SK192AGR(Q4024)



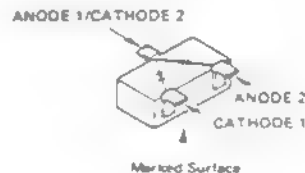
2SA733A0(Q4025)
2SA1528
(Q4030,4033,4035)
2SC458C
(Q4006,4007,4018)
4023,4032,4034
4037
2SC460B
(Q4009,4014,4014)
4017,4019,4021
4036



BA1A4M(Q4028,
BA1A4P
(Q4004,4008,4040)
BA1L3Z(Q4005)
BA1L4M(Q4038,4039)
BN1A4P(Q4029,4031)

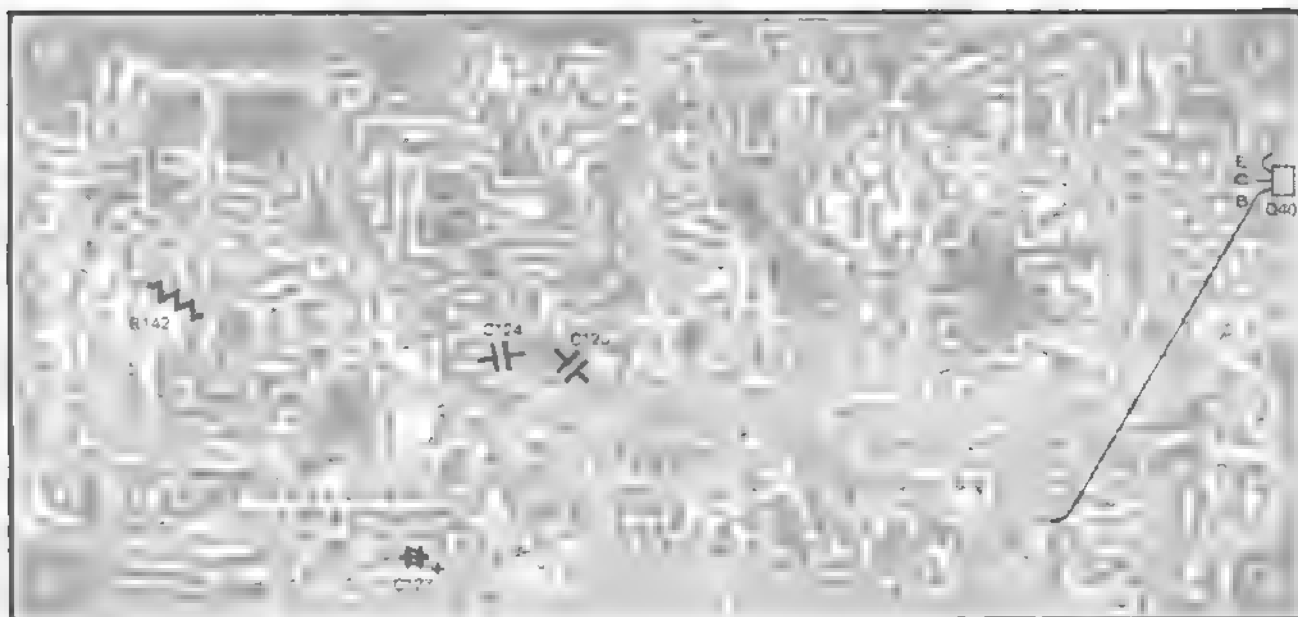


2SC2619F(FB) (Q9702,9703)
2SC2712GR(LG) (Q9902,9903)

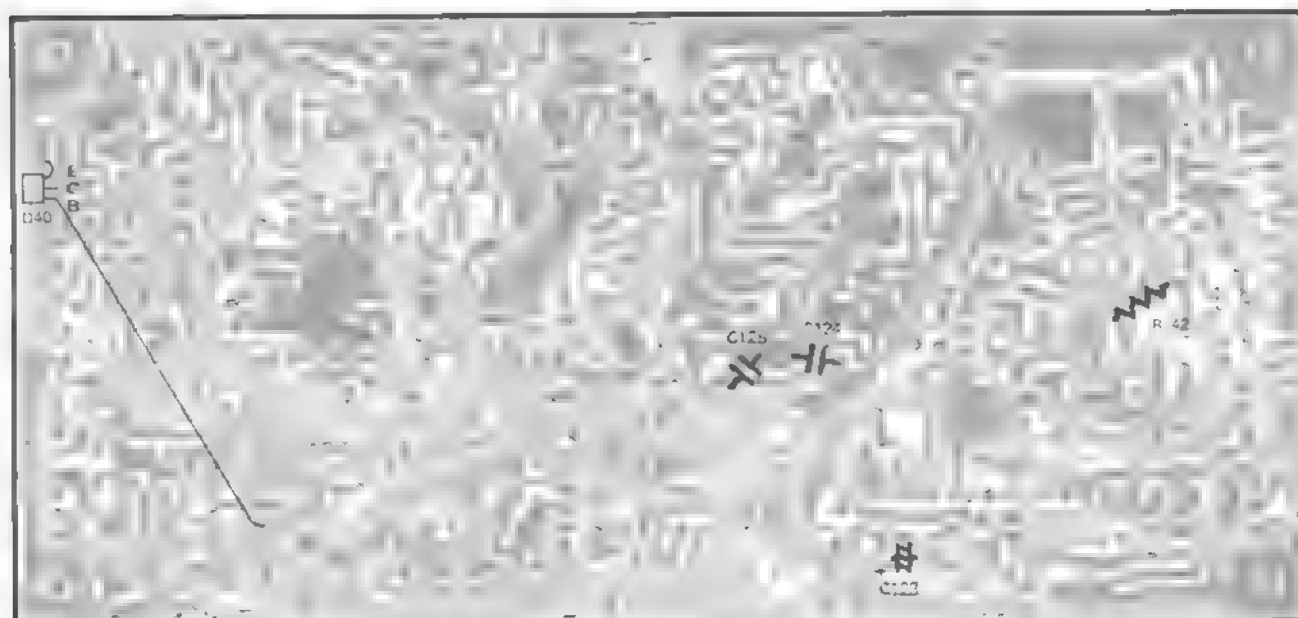


1SS226(C3) (Q9901)

2SC535B(Q4001)
2SC1815GR(Q4002)



Solder side (obverse)



Solder side (reverse)

TX UNIT PARTS LAYOUT

TX UNIT VOLTAGE CHART

(DC VOLTS)

	E'S	C.D	G	B	G ₂	REMARKS		E'S	C.D	G	B	G ₂	REMARKS
Q4001	28	7.5	34				Q4023	0	7.6	0			
Q4002	342	741	411				Q4024	269	788	099			CW ALC D SC
Q4004	0	0	496/004			SSB CW FM N CW-N	Q4025	330	174	270			@ 10W output
Q4005	0	0	72/0			SSB CW FM	Q4028	362/079	330 0	001 75			CW KEY JP DOWN
Q4006	014/016	435/390	080/055			with MIC input without MIC input	Q4029	790	785 0	0 785			SSB / SSB
Q4007	0	1210/020	042/078			with MIC input without MIC input	Q4030	790	785 0	070/790			CW CW-N CW,CW-N
Q4008	0	043/078	0			with MIC input without MIC input	Q4031	790	780/001	0/780			FM,FM-N,FM,FM-N
Q4009	13	35	20				Q4032	0	787/002	001/0074			TX RX
Q4010	0	70	15	20			Q4033	790	003/002	790/780			TX RX
Q4013	285	772	347			SSB	Q4034	0	790/0	0 075			TX RX
Q4014	130	357	196			SSB	Q4035	790	002 0	790 0			TX / RX
Q4017	08	35	14			SSB	Q4036	34	74	41			
Q4018	0	0 006	0 069			SSB PROC OFF ON	Q4037	0	108	048			@ 10W output
Q4019	282	730	352			SSB	Q4038	0	770/0	004/710			CW KEY JP DOWN
Q4021	140	527	206			SSB	Q4039	0	004/710	415/0			CW KEY JP DOWN
Q4022	0	713	143	268		DRIVE control CCW	Q4040	0	0	0,770			TX / RX

TX UNIT IC VOLTAGE CHART

(DC VOLTS)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	REMARKS
Q4003	277	278	276	676	280	281	281	281	281	235	0	277	277	276	
Q4011	280	280	280	0	235	282	282	675							SSB
Q4015	700	610		0	305	305	305								SSB
Q4016	70	61		0	31	31	31								SSB
Q4020	690	610		0	305	305	305								SSB
Q4026	L/L	H/L	L/H	L/H	H/H	L/L	0	L/L	H/L	L/H	H/L	L/L	L/H	790	CW KEY JP/DOWN
Q4027	L/H	H/L	L/H	L/381	H/H	L/357	0	L/H	H/H	L/L	H/H	L/H	L/L	790	H 80 L = 0

APP

TR

2

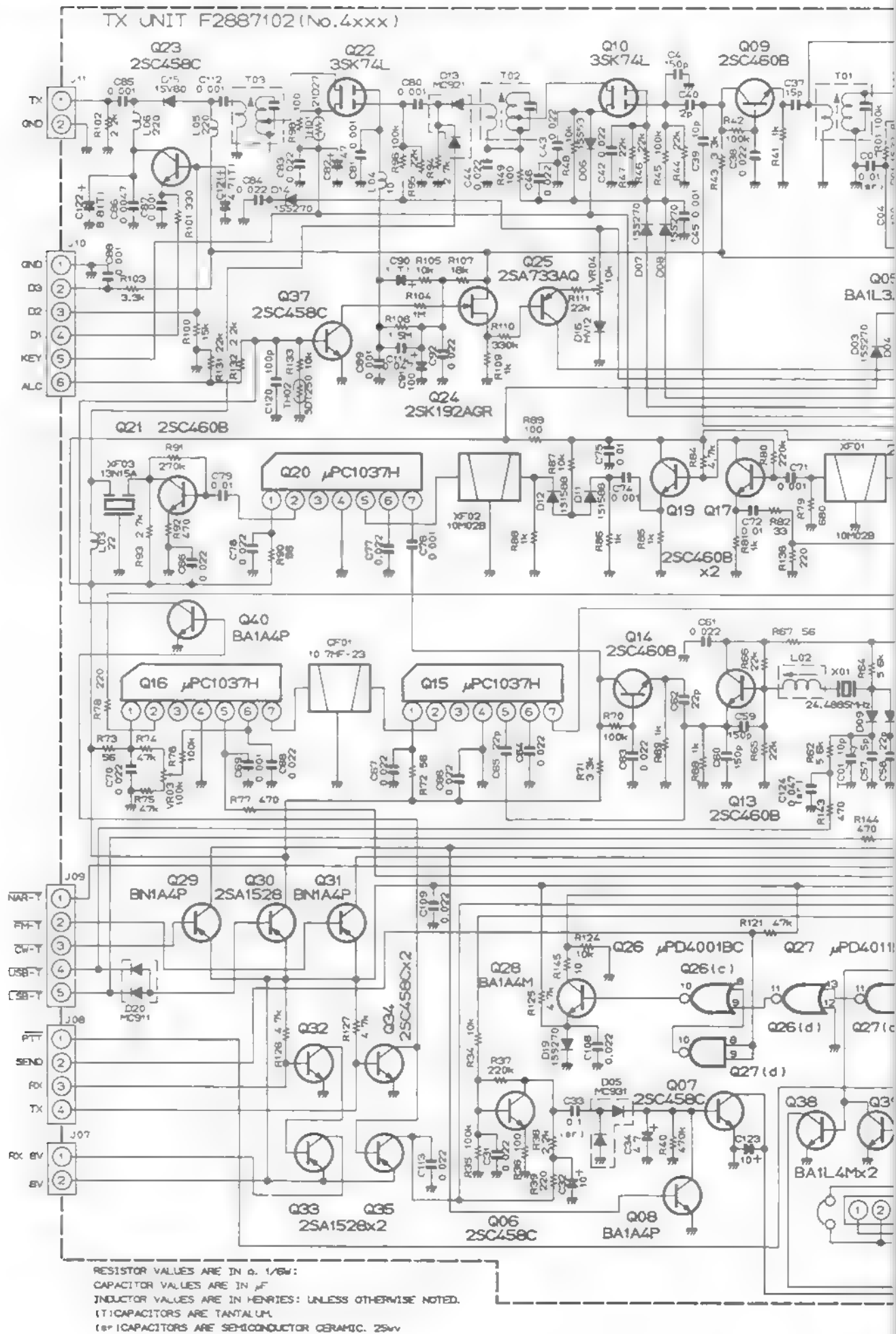
1

TONE

2

1

TX UNIT CIRCUIT DIAGRAM



UNIT PARTS LAYOUT/CIRCUIT DIAGRAM

AF UNIT VOLTAGE CHART

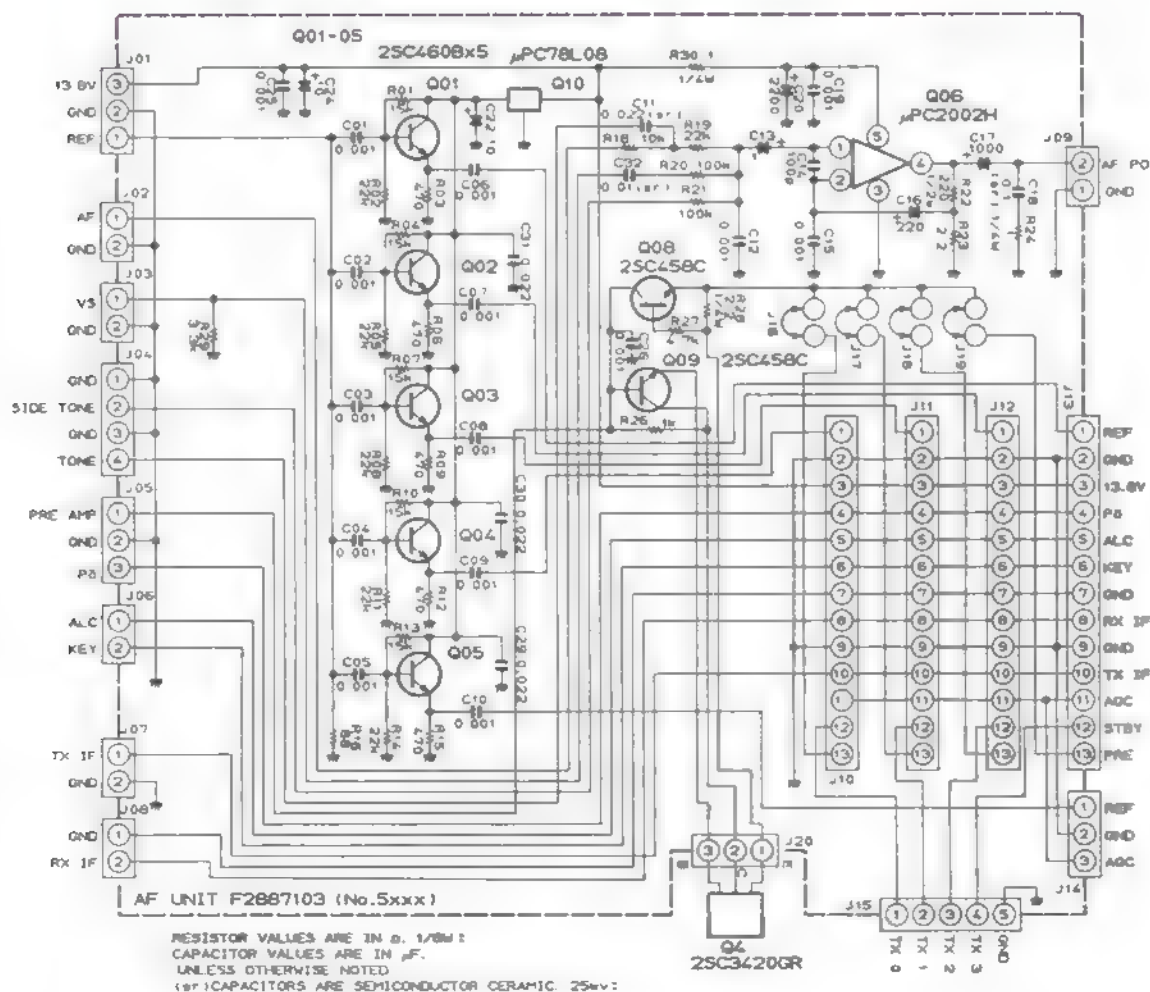
(DC VOLTS)

	E/S	C/D	G	B	G ₂	REMARKS		E/S	C/D	G	B	G ₂	REMARKS
Q5001	3.4	8.0	4.1				Q5005	3.4	8.0	4.1			
Q5002	3.4	8.0	4.1				Q5008	0.01/1250	0.01/1360	0.01/1250			PRE AMP OFF ON
Q5003	3.4	8.0	4.1				Q5009	0.01/1360	13.60	0.01/1310			PRE AMP OFF ON
Q5004	3.4	8.0	4.1										

AF UNIT IC VOLTAGE CHART

(DC VOLTS)

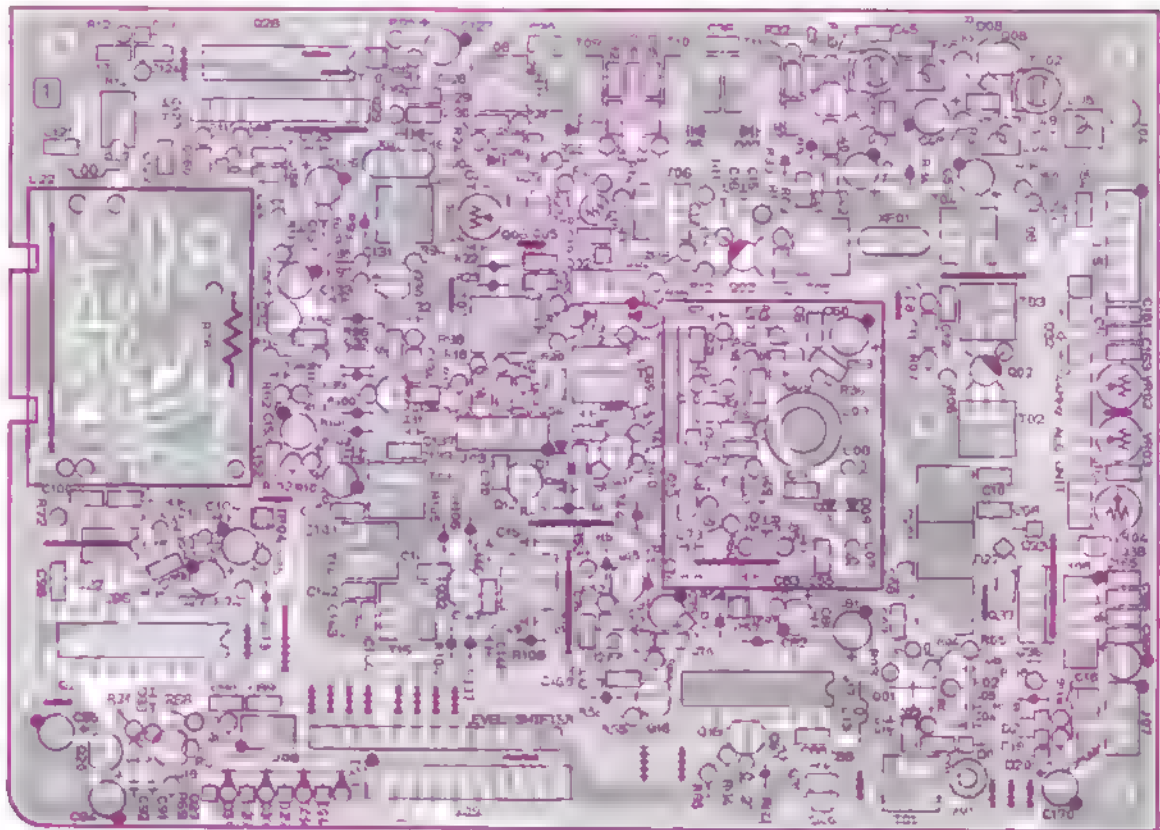
	1	2	3	4	5	REMARKS		1 IN	2 GND	3 OUT	4	5	REMARKS
Q5006	0.7	0.7	0	6.4	13.6		Q5010	13.8	0	8.0			



42
UNIT

144MHz MAIN UNIT PARTS LAYOUT

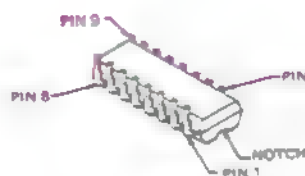
144MHz MAIN UNIT (No. 6XXX)



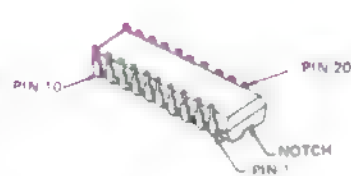
Component side (obverse)



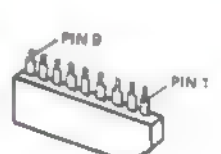
MB504(Q6022)
MB505-16(Q6027)



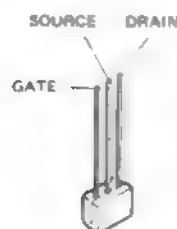
TC9122P(Q6028)
MC145155P(Q6017)



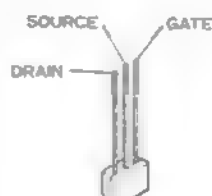
MC145156P(Q6021)



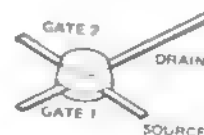
TC5081AP(Q6029)



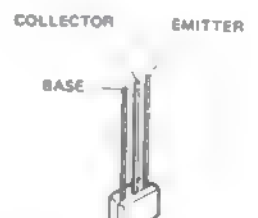
2SK192AGR(Q6009)
2SK241GR
(Q6005,6006,6010
6013,6014,6033)



2SK507F(Q6024)



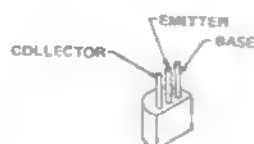
3SK122L(Q6001,6003)



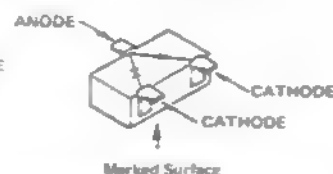
BA1A4P
(Q6004,6039,6040)



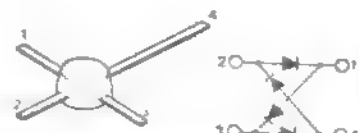
2SB7720(Q6035,6036)



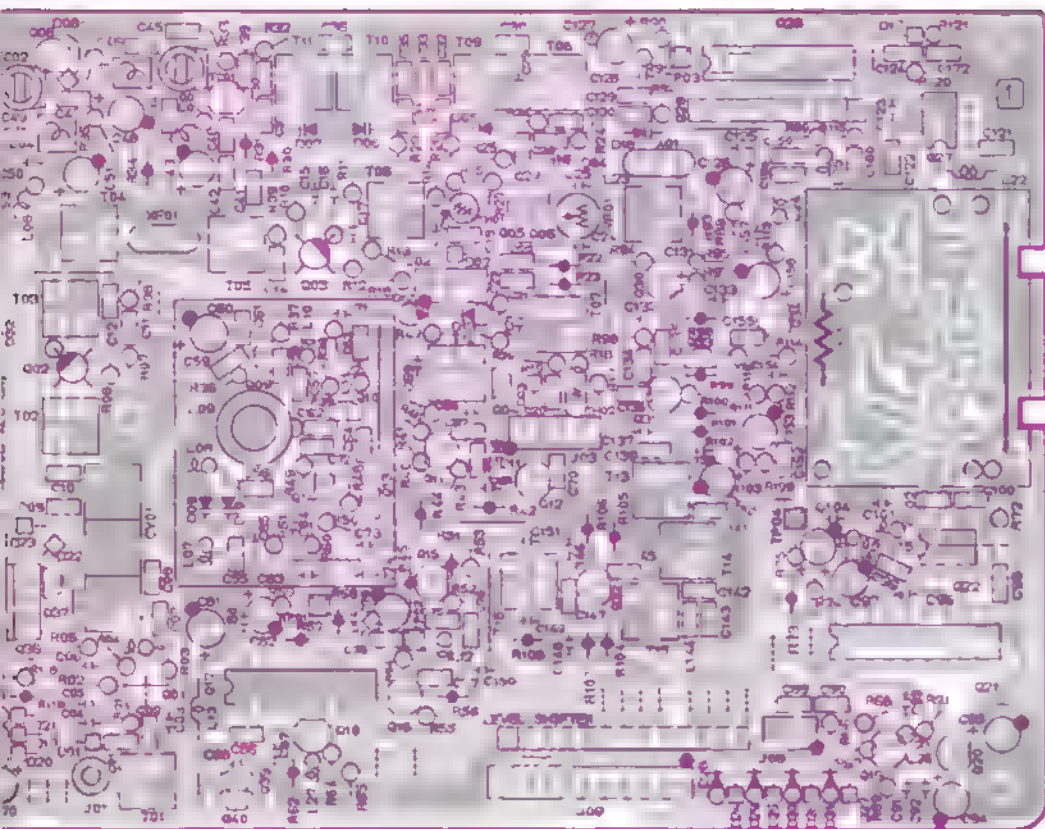
2SC3355(Q6025)



1SS181 A3 09501,9502

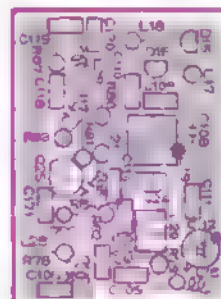


ND487C1-3R(Q6002)

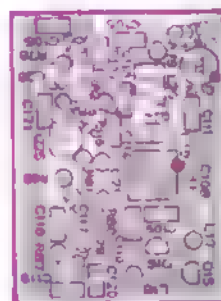


Component side (reverse)

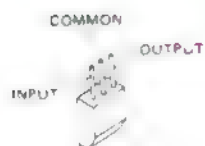
144MHz SUB VCO UNIT (No. 6×××)



Component side (obverse)

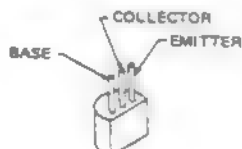
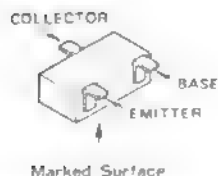


Component side (reverse)



μPC78L05(Q6020)

μPC358G(Q9501)



Q2712GR(LG) (Q9101-9106)

2SA1528(Q6037,6038)

2SC458C

(Q6012,6018,6019)

2SC460B(Q6030,6034)

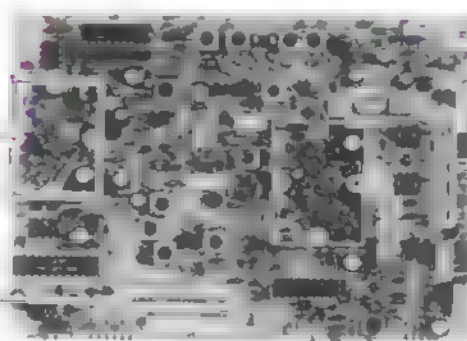
2SC535B

(Q6011,6015,6016)
6031,6032

2SC2026(Q6007)

2SC2053(Q6008)

144MHz SUB VCO UNIT



144MHz
SHIFT UNIT

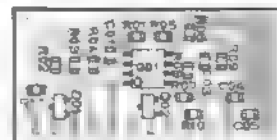
144MHz
ALC UNIT

144MHz SHIFT UNIT (No. 91××)

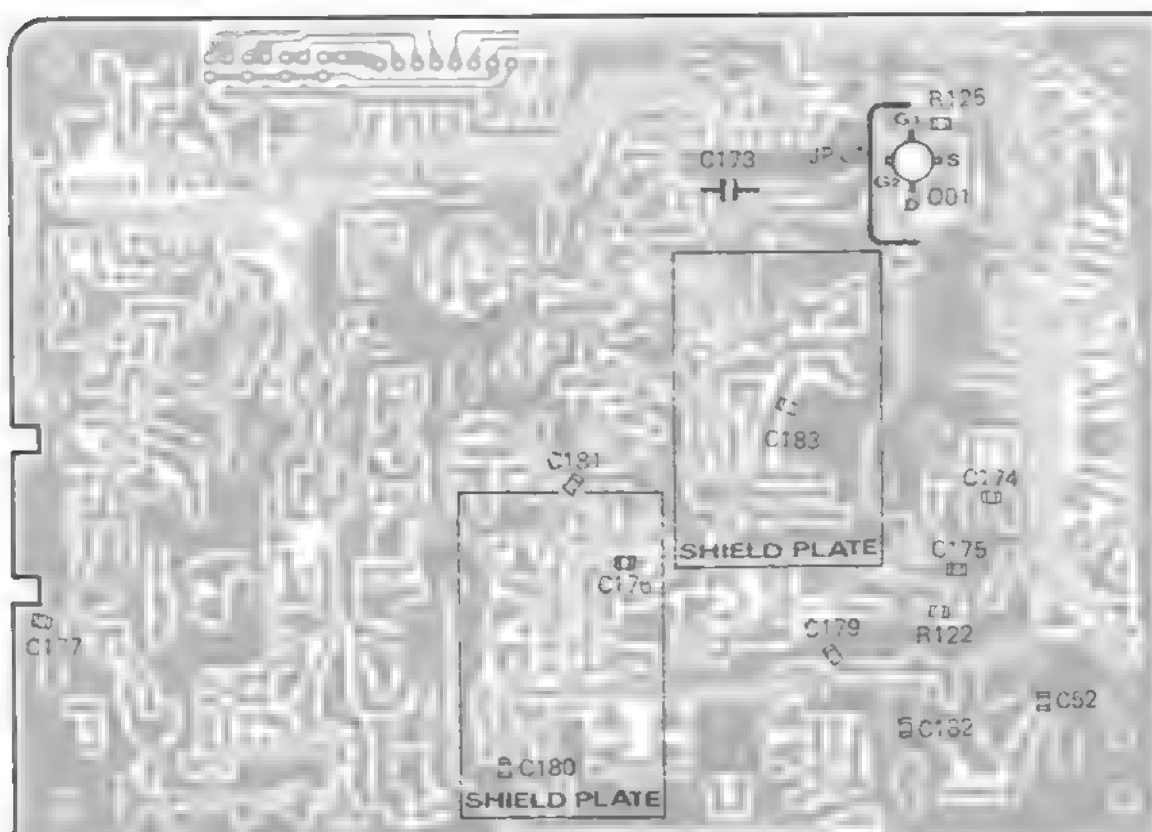


Solder side (obverse)

144MHz ALC UNIT (No. 95××)



Solder side (obverse)



Solder side (obverse)

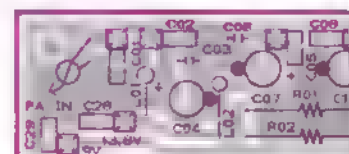
144MHz MAIN UNIT VOLTAGE CHART

(DC VOLTS)

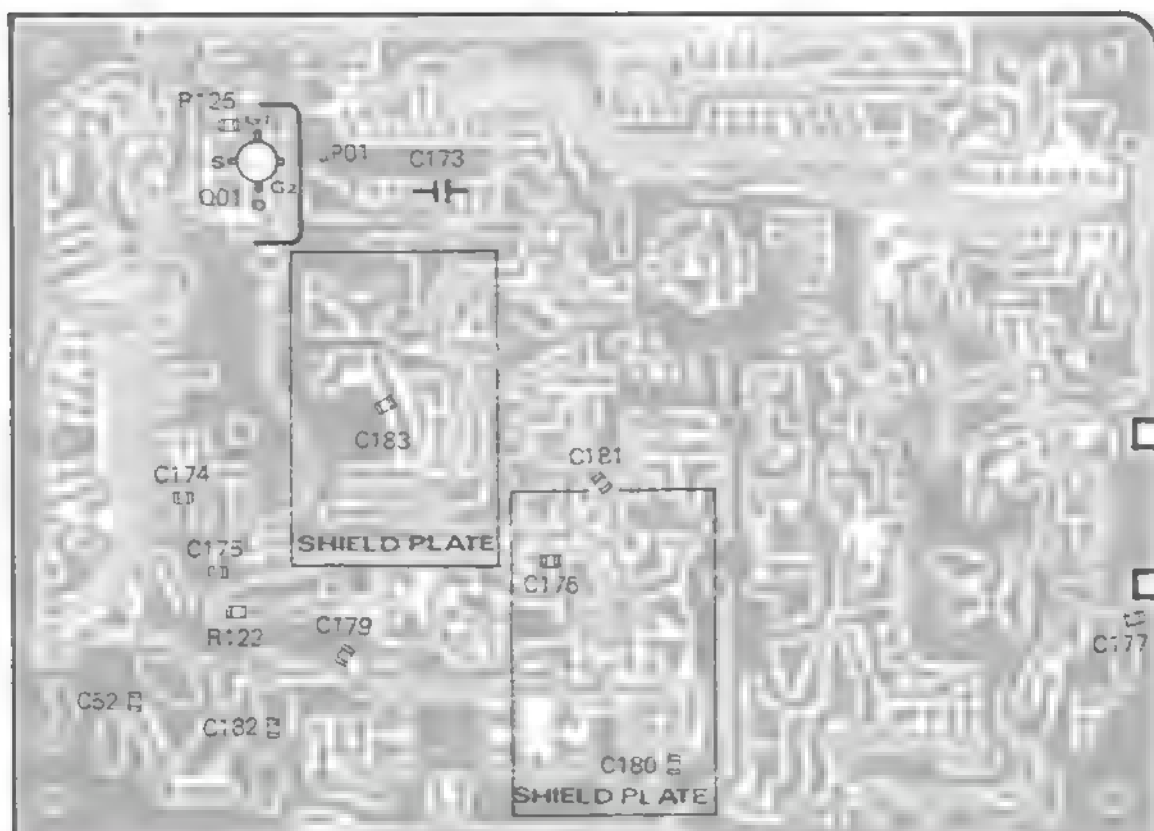
	E.S	C.D	G	B	G _L	REMARKS		E.S	C.D	G	B	G _L	REMARKS
06001	1.03	8.70	0.93	2.04		RX	06018	0.2	9.0	2.3			
06003	0.6	8.4	0.6	4.5		RX	06019	1.5	8.8	2.1			
06004	0.90	0.0	0.001			RX / TX	06024	1.3	8.9	0			
06005	1.0	8.6	0			TX	06025	1.3	7.8	2.0			
06006	1.0	8.6	0			TX	06030	2.3	7.9	2.9			
06007	1.0	8.9	2.5			TX	06031	0.9	7.8	1.5			
06008	0	1.35	0.7			TX	06032	8.70	1.96	1.20			
06009	0.66	8.50	0				06033	0	4.1	0			
06010	0	9.0	0				06034	0.9	4.9	1.5			
06011	1.45	8.70	1.65				06035	1.37	1.38	1.29			
06012	0	0.07	0.71				06036	9.00	0.900	9.05/8.32			RX / TX
06013	3.3	9.0	2.6				06037	9.00	9.00/0	0.76/9.00			RX / TX
06014	0	4.9	0				06038	0/12.60	0/12.60	0.01/0.82			PRE AMP OFF ON
06015	1.10	5.80	1.73				06039	0	0.13/8.80	4.90/0			RX / TX
06016	1.40	5.20	1.14				06040	0	8.85/0.22	0/4.90			RX / TX

144MHz PA UNIT IC VOLTAGE CHART (DC VOLTS)

	1	2	3	4	5	REMARKS
Q6501	—	13.80	9.00	13.34	—	@ 10W output



144MHz MAIN UNIT PARTS LAYOUT



Solder side (reverse)

144MHz MAIN UNIT IC VOLTAGE CHART

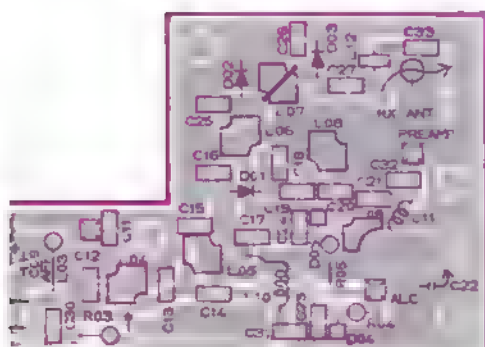
(DC VOLTS)

	1(IN)	2(ND)	3(UT)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
Q6002	0		0																		RX
Q6017	8.80	0			8.80	2.70	0	8.80	0.07	0.075	0.07	0.05	-	-	-	-	3.50	0			
Q6020	8.8	0	5.0																		
Q6021	0	4.90			4.90	0.97	0	4.30		2.00	0.06	0.05	0.06	-	-	-	2.60		2.06	4.90	
Q6022	2.60	5.00	-	2.96	0	4.30		2.60													
Q6027	2.5	5.0	5.0	2.7	0	2.5															
Q6028	7.50	3.10	0	7.50	0	0	7.50	0	0	0	0	0	0	0	0	0	0.34	0			
Q6029	3.40	3.30	2.80	-	7.50	-	3.40	0.34	0												

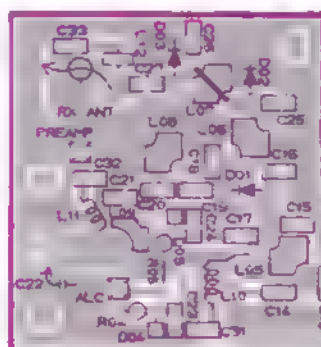
144MHz PA UNIT (No. 65XX)

1. NPUT
2. Vcc₁
3. Vcc₂
4. Vcc₃
5. OUTPUT
6. FLA

M57713(10W)
M57727(25W) (06501)

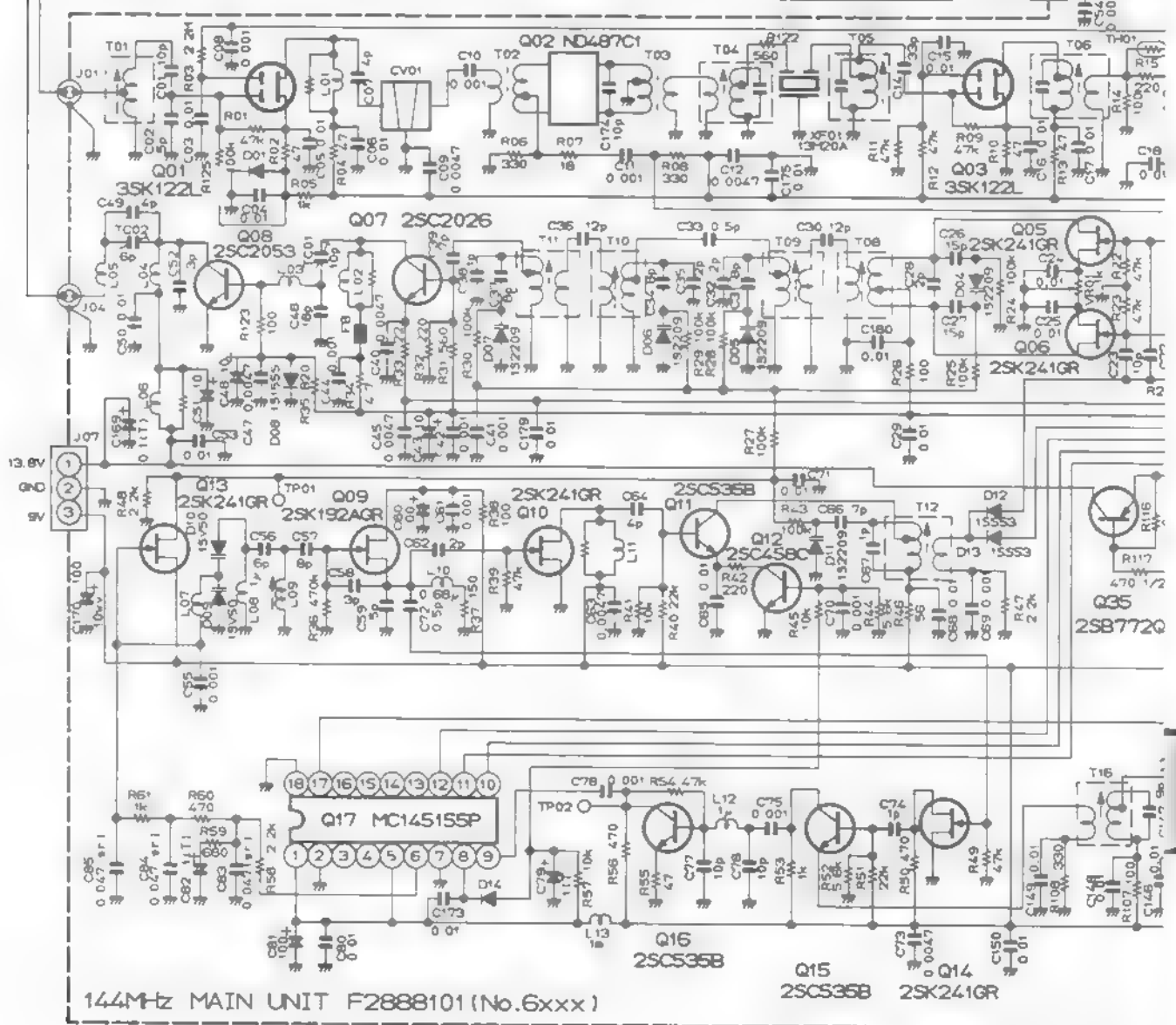
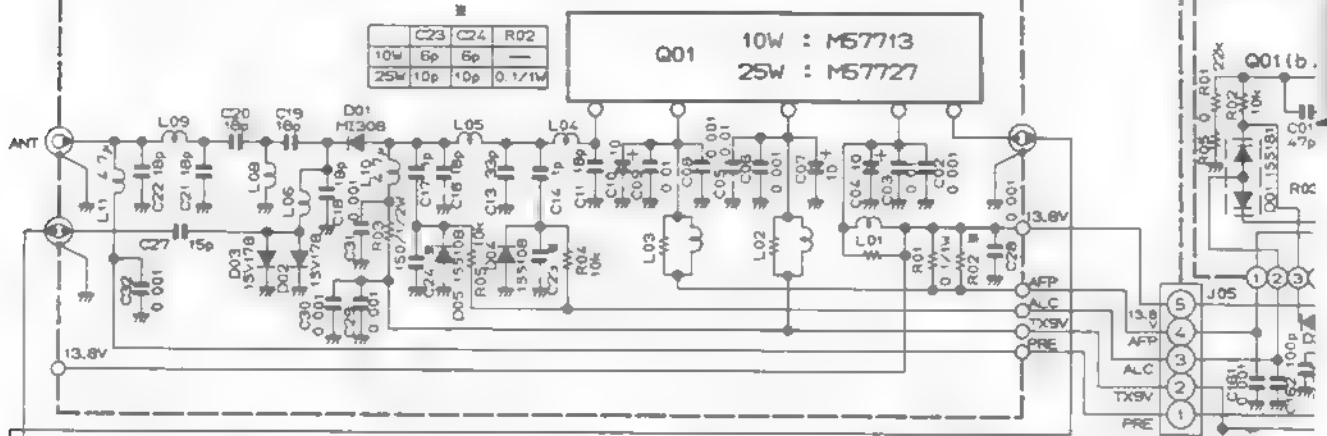


Component side (obverse)



Component side (reverse)

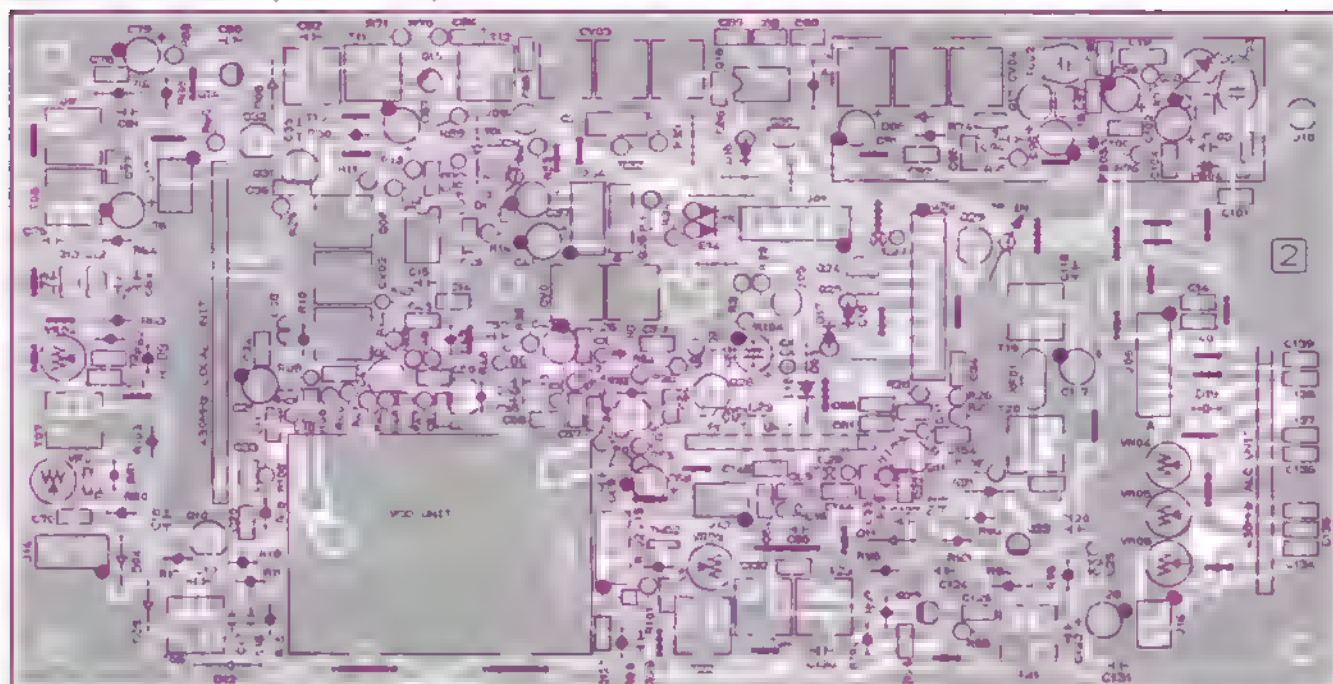
144MHz P.A UNIT F2887104 (No.65xx)



RESISTOR VALUES ARE IN Ω , 1/6W;
CAPACITOR VALUES ARE IN μ F
INDUCTOR VALUES ARE IN HENRIES
UNLESS OTHERWISE NOTED.

DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.
1T) CAPACITORS ARE TANTALUM.
1e) CAPACITORS ARE SEMICONDUCTOR CERAMIC, 25V.

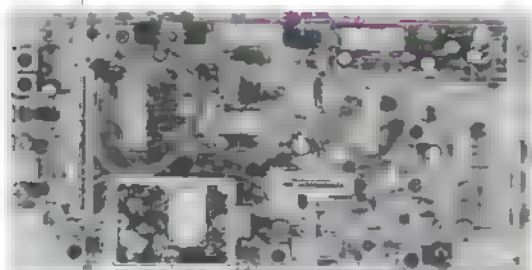
430MHz RF UNIT (No. 7XXX)



Component side (obverse)

430MHz LOCAL UNIT

430MHz ALC UNIT



VCO UNIT PLL IC UNIT

PLL IC UNIT
(No. 76XX)

430MHz ALC UNIT
(No. 96XX)



Mixed component side (obverse)

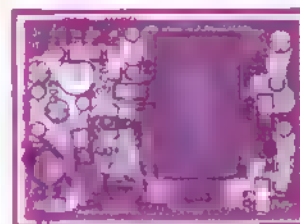


Solder side (obverse)



Mixed component side (reverse)

VCO UNIT (No. 74XX)



Component side (obverse)

430MHz LOCAL UNIT

(No. 77XX)



Mixed component side (obverse)



Chip only side (obverse)



Chip only side (obverse)



Mixed component side (reverse)



Chip only side (reverse)

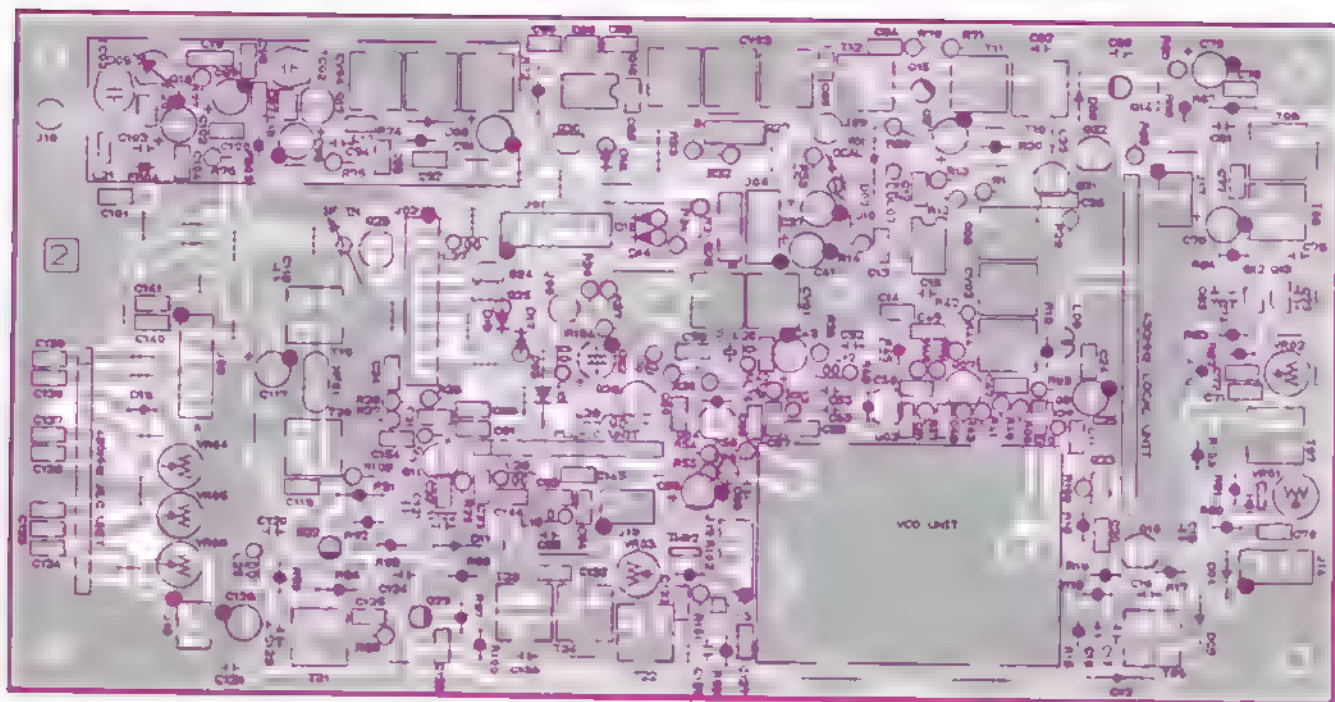


Chip only side (reverse)



Component side (reverse)

480MHz RF UNIT PARTS LAYOUT



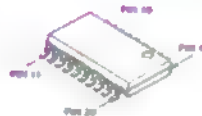
Component side (reverse)



μPC358G(09601)
MB503(07602,7703)



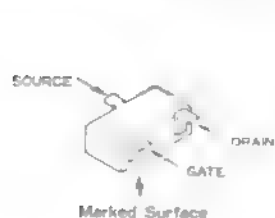
μPC1656C(07008,7016)



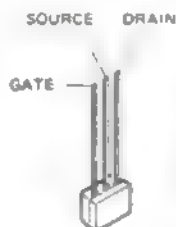
JLC1007(07601)



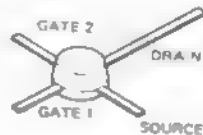
2SK125(07401)



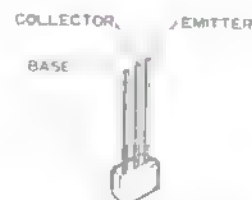
2SK210GR(YG) (07701)
2SK302GR(TG) (07702)



2SK241GR
(07012,7013,7033)



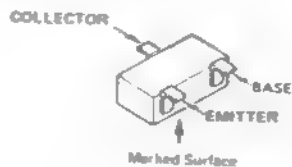
3SK81(07023)
3SK122L(07014,7022)



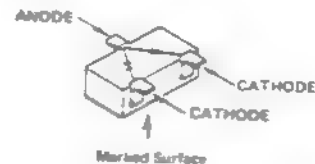
BA1A4P
(07024,7025,7030,
7034)



2SA1528(07028,7029)
2SC458C
(07011,7031,7032)
2SC460B(07010)



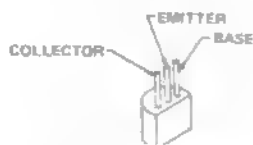
2SC2712GR(LG) (07705)



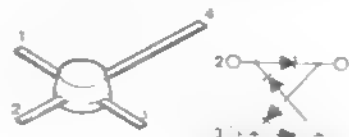
1SS181(A3) (09601,9602)



2SB7720(07026,7027)

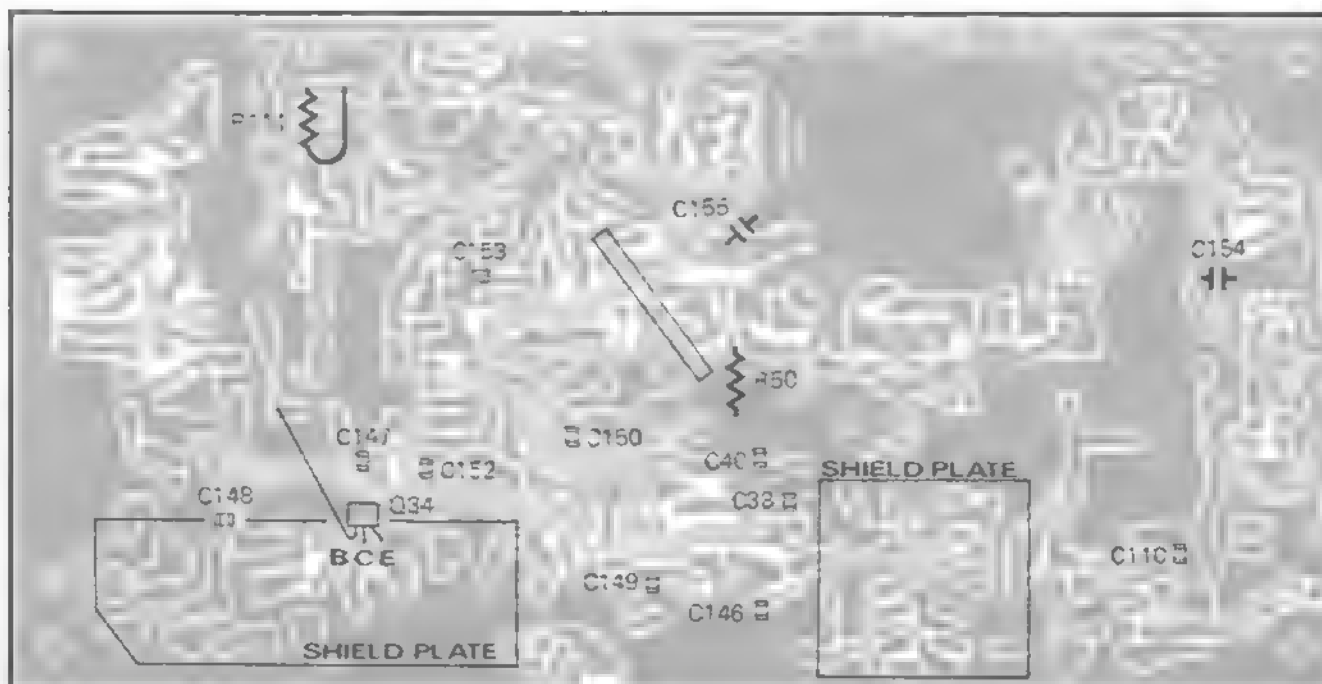


2SC2407(1) (07018)
2SC3355
(07003,7004,7007,
7017,7402)



ND487C2-3R(07015)

430MHz RF UNIT PARTS LAYOUT



Solder side (obverse)

430MHz RF UNIT VOLTAGE CHART

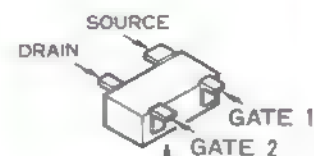
(DC VOLTS)

	ES	CD	G	B	G _e	REMARKS		ES	CD	G	B	G _e	REMARKS
Q7003	1.50	4.40	2.15				Q7024	0	0.15/0.75	4.90	0		RX / TX
Q7004	0.5	5.6	1.3				Q7025	0	8.80/0.35	0.485			RX / TX
Q7007	1.27	5.53	2.02				Q7026	1.38	13.8/13.6	12.8/12.7			RX / TX
Q7010	0.9	8.1	1.6				Q7027	9.0	0.90	9.0/8.3			RX / TX
Q7011	1.20	5.90	1.85				Q7028	9.0	9.0	0.8/9.0			RX / TX
Q7012	0.80	8.75	0	0.80			Q7029	0	12.60	0	12.60	0.01/0.82	PRE AMP OFF/ON
Q7013	0.80	8.75	0	0.80			Q7030	0	0.25/0.03	0.900			RX / TX
Q7014	2.65	8.20	2.70	5.20			Q7031	0	0.037	0.65			
Q7017	0	9.00	0.75				Q7032	0	0	0.037			
Q7018	0	13.20	0.65				Q7033	0	7.3	0			
Q7022	1.03	8.57	0.92	2.03			Q7034	0.079	0	8.95, 0			PX / TX
Q7023	0.70	8.70	0	0.89									

430MHz RF UNIT IC VOLTAGE CHART

(DC VOLTS)

	1(IN)	2(OUT)	3	4	5	6	7	8	REMARKS
Q7008	0.97	0	0	0	4.80	9.00	9.00	0	
Q7015	0	0							
Q7016	0.98	0	0	0	4.78	8.80	8.80	0	



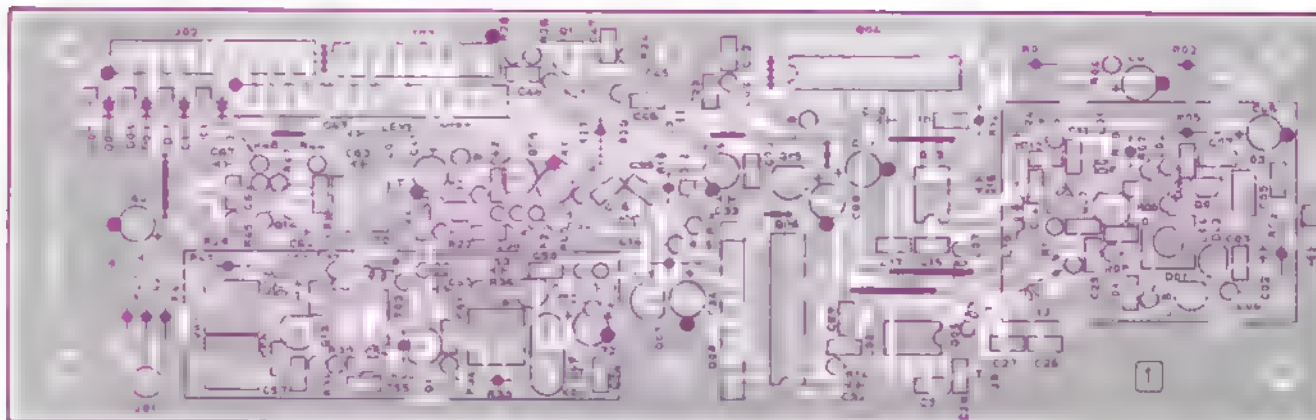
Marked surface

3SK164(F0) (Q7801,7802)

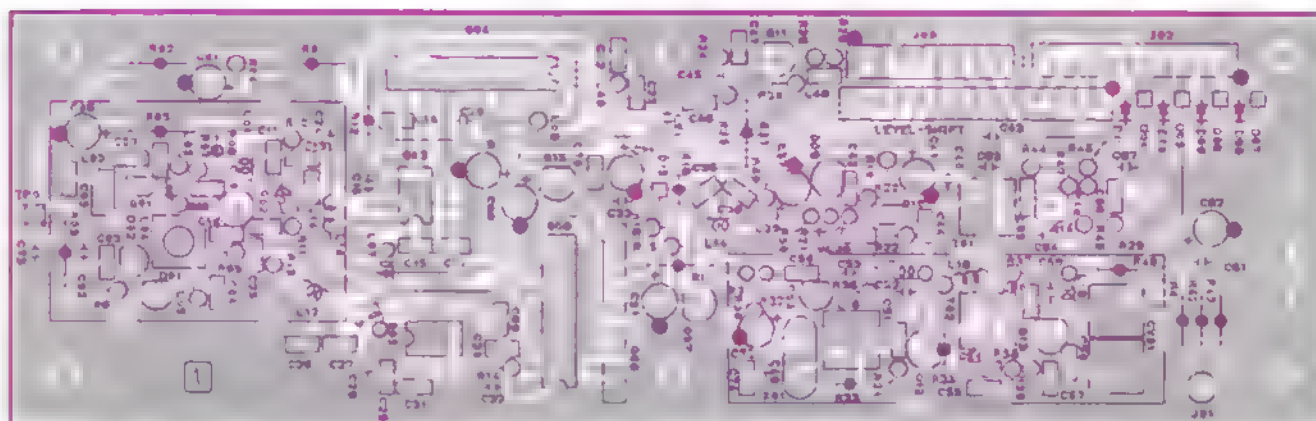
[illegible]

430MHz PLL UNIT PARTS LAYOUT

430MHz PLL UNIT (No. 8XXX)



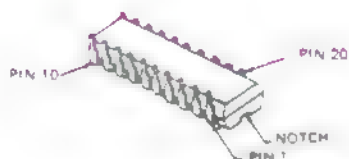
Component side (obverse)



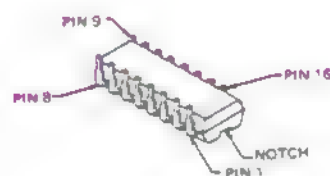
Component side (reverse)



MB504(Q8003)
MB505-16(Q8005)



MC145156P(Q8004)



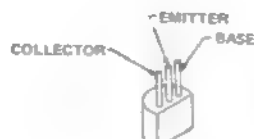
TC9122P(Q8006)



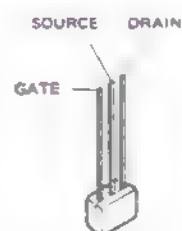
TC5081A1



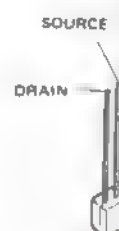
2SC4580(Q8007.8011)
2SC535B
(Q8009.8012.8014)



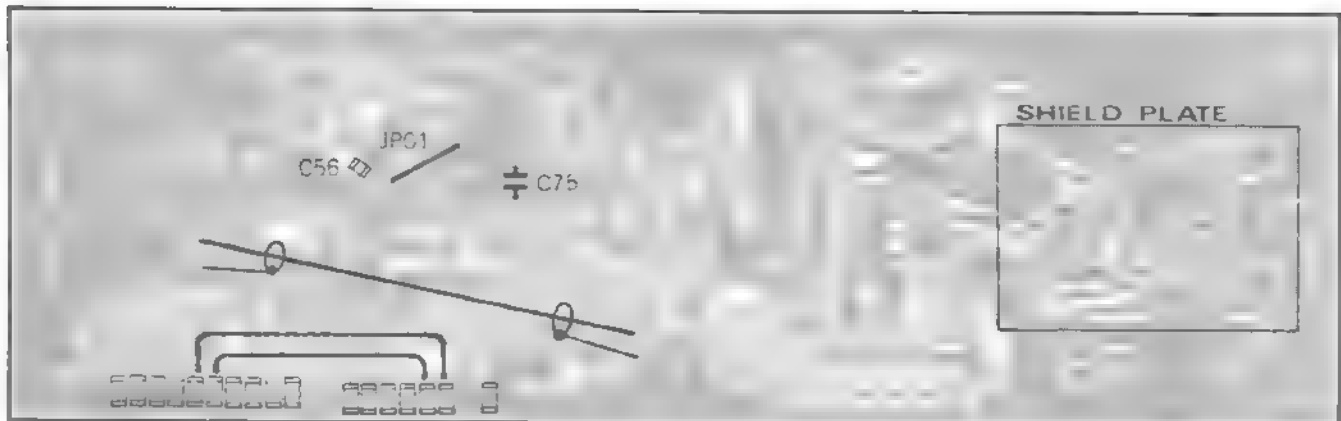
2SC2407A(Q8013)
2SC3355(Q8002)



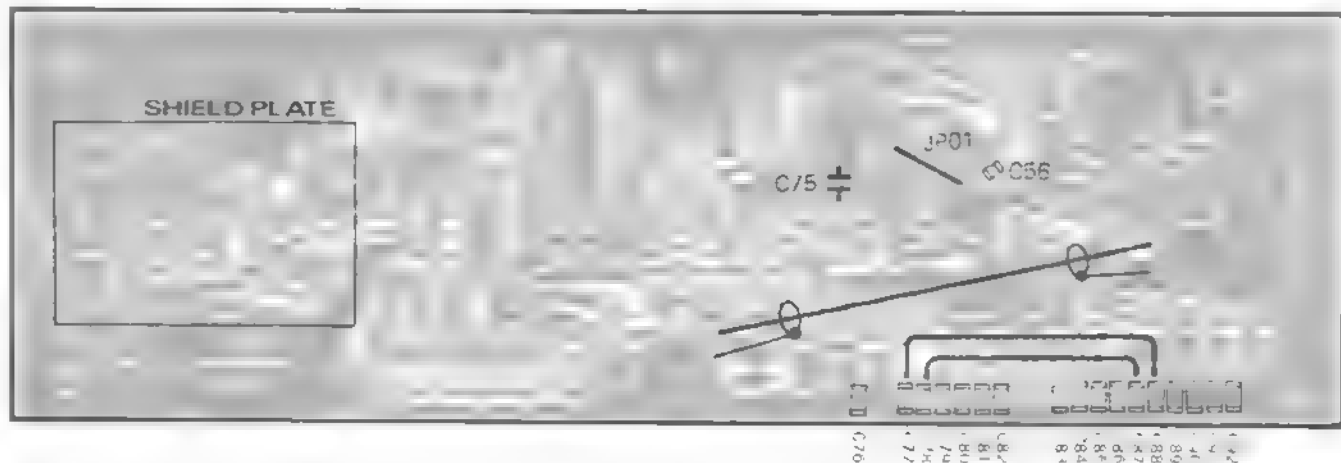
2SK241GR(Q8010)



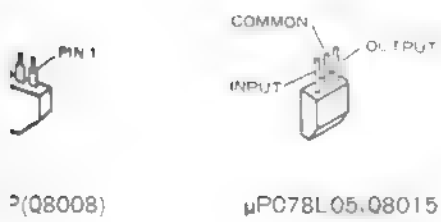
2SK507F



Solder side (obverse)



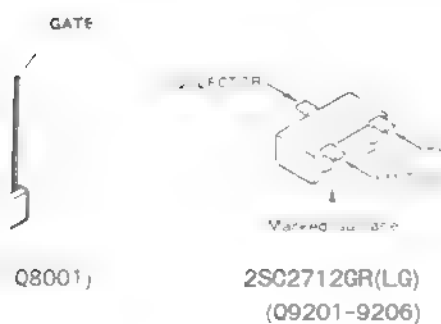
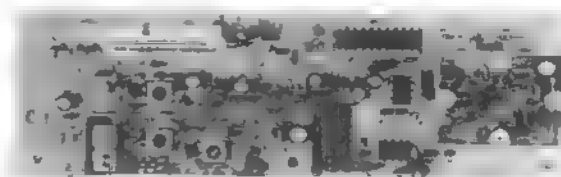
Solder side (reverse)



Q8008)

μPC78L05, Q8015

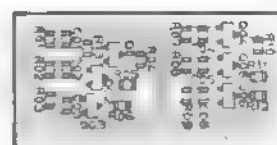
430MHz SHIFT UNIT



Q8001)

2SC2712GR(LG)
(Q9201-9206)

430MHz SHIFT UNIT (No. 92XX)



① ④ ⑦ 10 13
Solder side (obverse)

430MHz PLL UNIT VOLTAGE CHART

(DC VOLTS)

	E S ₁	C/D ₁	G ₁	B ₁	G ₂	REMARKS		E/S ₁	C/D	G	B	G ₂	REMARKS
Q8001	0.96	8.90	0				Q8011	1.4	7.5	2.0			
Q8002	1.2	7.7	2.0				Q8012	3.0	8.7	3.6			
Q8007	0	4.40	0.55				Q8013	0.86	8.65	1.50			
Q8009	4.75	1.00	1.70				Q8014	1.2	8.6	1.9			
Q8010	0	7.80	0.01										

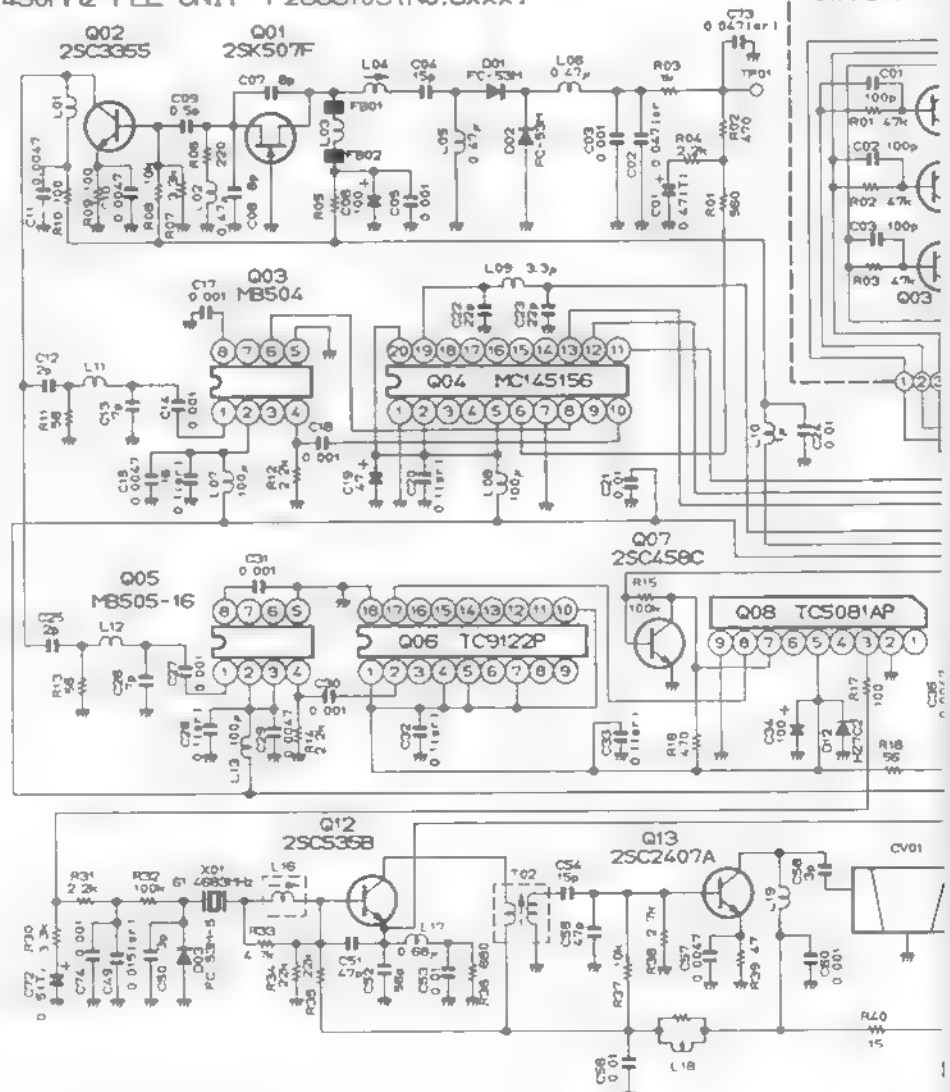
430MHz PLL UNIT IC VOLTAGE CHART

(DC VOLTS)

	1 IN	2 GND	3 OUT	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
Q8003	2.5	5.1		2.9	0	4.6		2.6													
Q8004	0	5.10			5.10	5.10	0	4.45		2.10	0.06	0.06	0.06						2.25	5.10	
Q8005	2.57	5.10	5.10	2.73	0			2.52													
Q8006	7.5	2.9		7.5	7.5		7.5			7.5								0.4	0		
Q8008		0	7.5		7.5		4.4	0.4	0												
Q8015	9.0	0	5.0																		

430MHz PLL UNIT F2888103 (No. 8xxx)

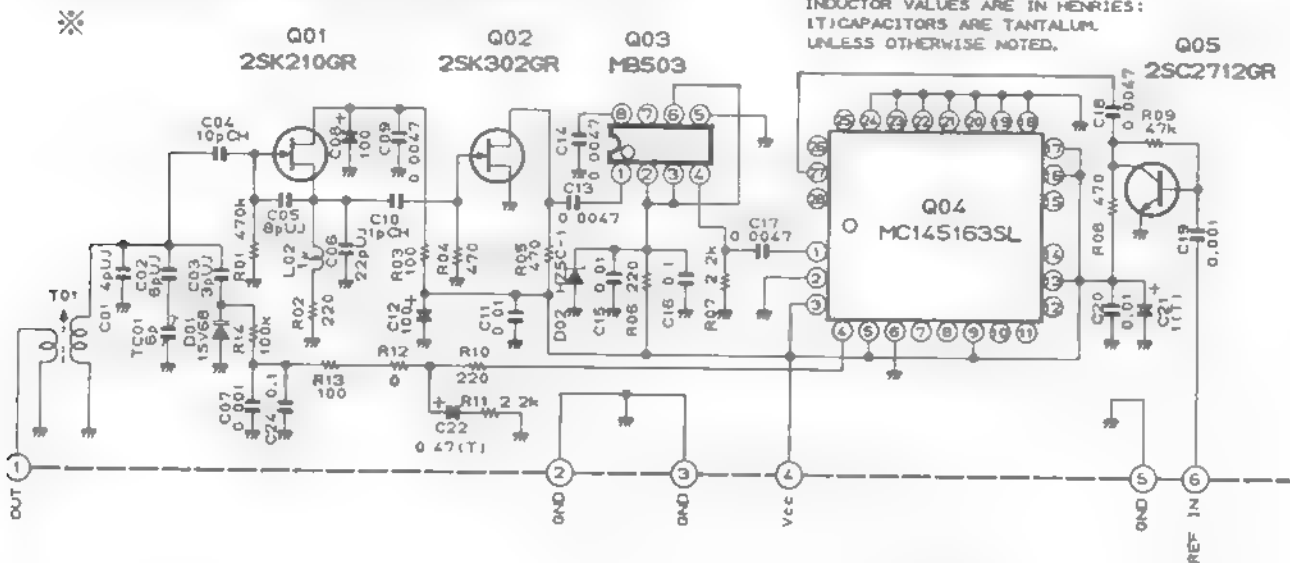
430MHz SHIF



430MHz PLL UNIT CIRCUIT DIAGRAM

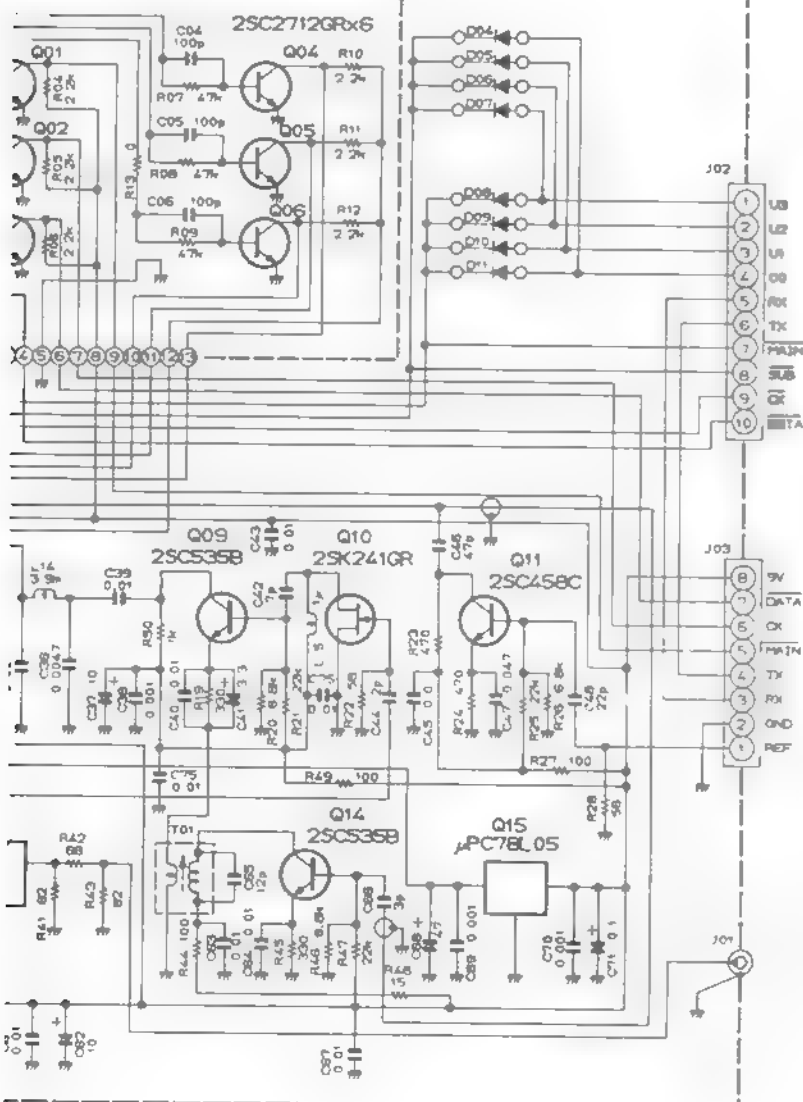
430MHz LOCAL UNIT F2919101 (No.77xx)

RESISTOR VALUES ARE IN Ω , 1/10W;
CAPACITOR VALUES ARE IN μ F
INDUCTOR VALUES ARE IN HENRIES;
1) CAPACITORS ARE TANTALUM
UNLESS OTHERWISE NOTED.



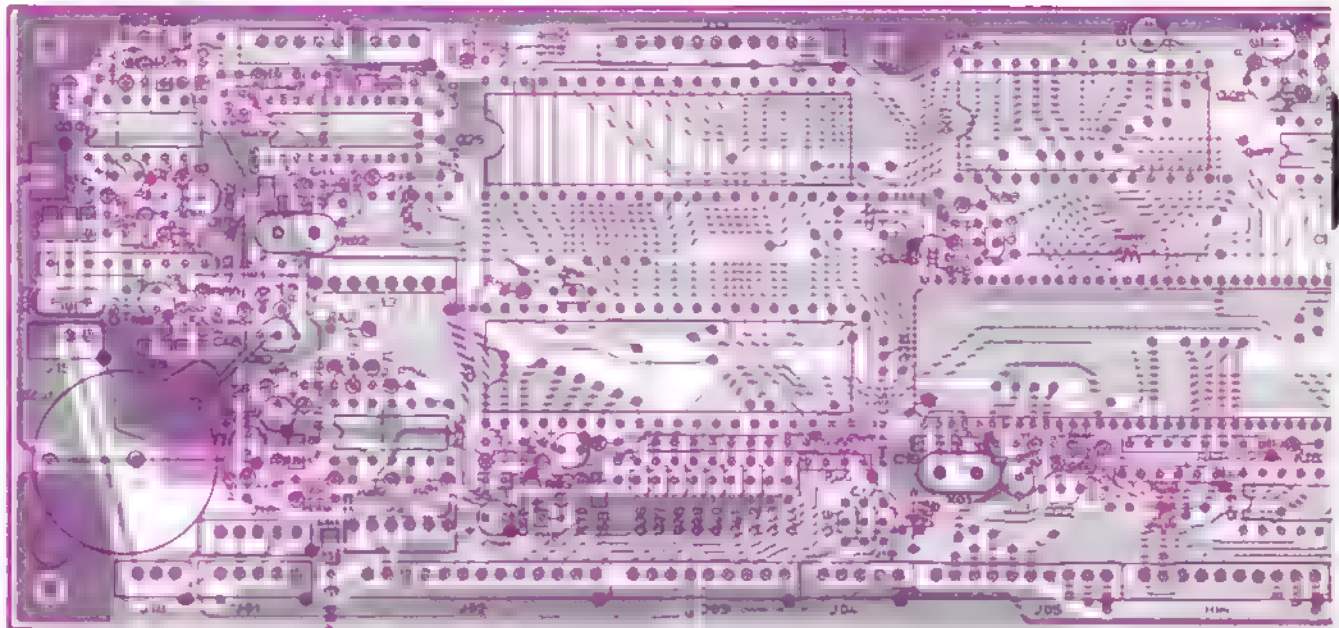
* 430MHz LOCAL UNIT Parts Layout:
See page 13.

T UNIT F2892108 (No.92xx)



CNTL UNIT PARTS LAYOUT

CNTL UNIT (No 1XXX)



CNTL UNIT IC VOLTAGE CHART

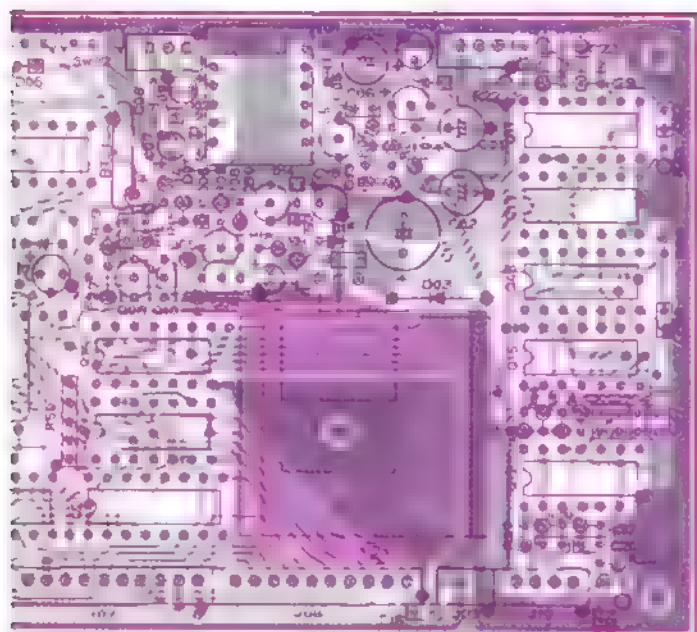
DC VOLTS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
01007	0	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0.07	0.08	0.08	0	1.00	1.50	1.70	1.50	1.60	4.10	
01024	4.30	2.90	0.70	0.70	1.50	5.00	5.00	5.00													
01025	0	5.00	5.00	5.00	5.00	0	5.00	0	0	0	0	0	0	0	5.00	5.00	0	3.60	5.00	2.50	5.00
01029	2.50	2.50	0	0.30	2.50	0	0	2.50	5.00	2.50	3.30	5.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	0

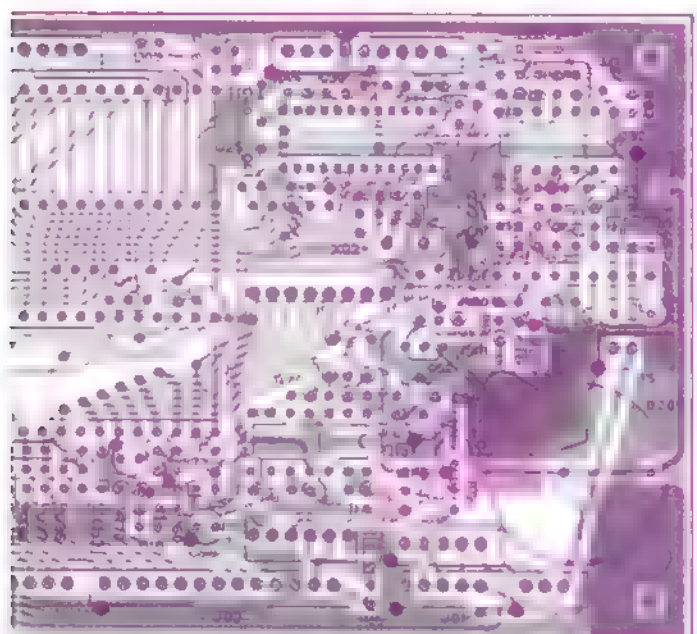
CNTL UNIT IC

	1	2	3	4	5	6	7
01008	5.00	9.00	2.00	2.1	2.2	2.3	2.4
01009	0	2.50	2.00	0	5.00	5.00	4.60
01010	0.02	0.03	0.03	5.00	5.00	4.30	5.00
01011	0.70	1.50	1.80	0.90	1.50	1.60	1.60

* In the initialize state.



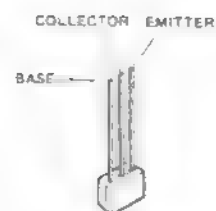
Component side (obverse)



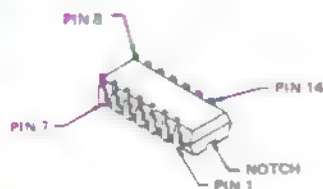
Component side (reverse)



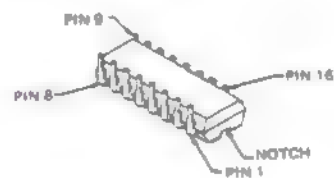
2SA733AQ(Q1046)
2SC458C
(Q1004-1006,1009)
(1022,1023)
2SC1384R(Q1002)
2SD867C(Q1001)



BA1A4M(Q1049)
BA1A4P
(Q1010,1016-1018)
(1026,1036-1044)
BN1A4M(Q1048)
BN1L4L(Q1051)



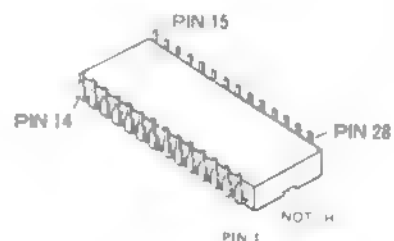
LA6324(Q1035)
MC14001BCP(Q1030)
MC14011BCP(Q1014)
MC14013BCP(Q1013)
MC14066BCP(Q1021)
MC14069UBCP(Q1011,1012)
MC14072BCP(Q1045)
MC14081BCP(Q1015)



HD74HC139P(Q1047)
MC14555BCP(Q1020)
MC14556BCP(Q1019)
 μ PD6302CA(Q1029)



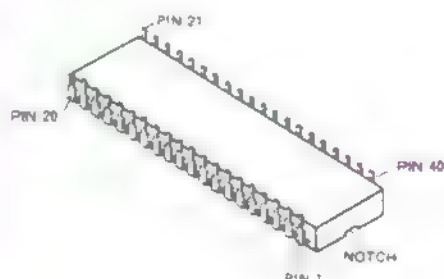
μ PC7805H(Q1003)



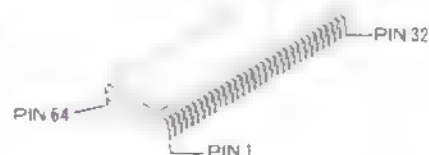
HM6264ALP-12(Q1007)

VOLTAGE CHART

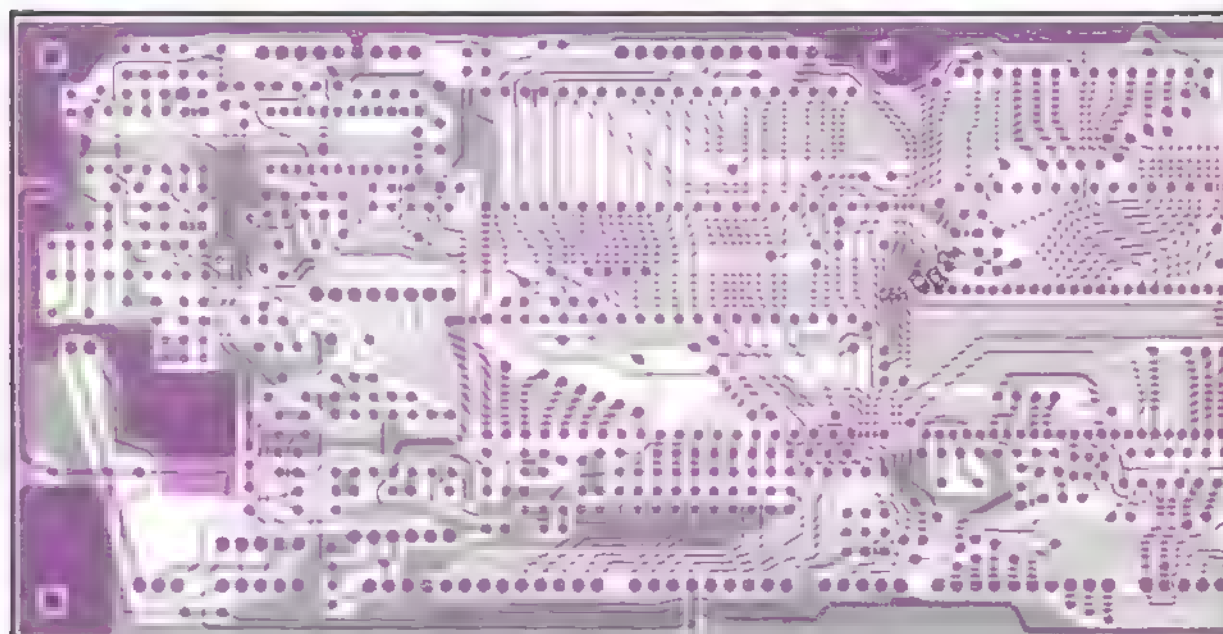
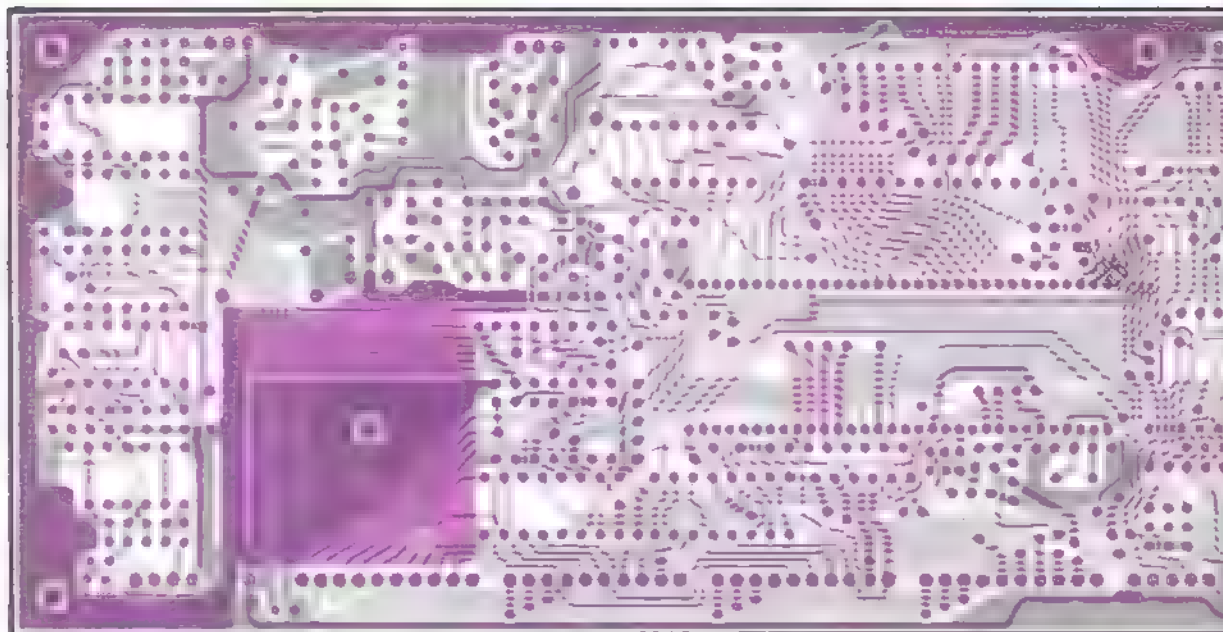
VOLTAGE CHART										DC VOLTS	
8	9	10	11	12	13	14	15	16	17	REMARKS	
25	26	27	28	29	30	31	32	33	34		
42	43	44	45	46	47	48	49	50	51		
59	60	61	62	63	64						
00	3.80	0	0	5.00	0.80	0.0	1.05	5.00	5.00		
70	4.70	5.00	5.00	0.02	5.00	0.05	4.60	5.00	5.00		
0	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0.01		
0	4.20	4.70	5.00	3.20	2.50						



HD63A21P(Q1024,1025)



HD63A01Y0(Q1008)



CNTL UNIT VOLTAGE CHART

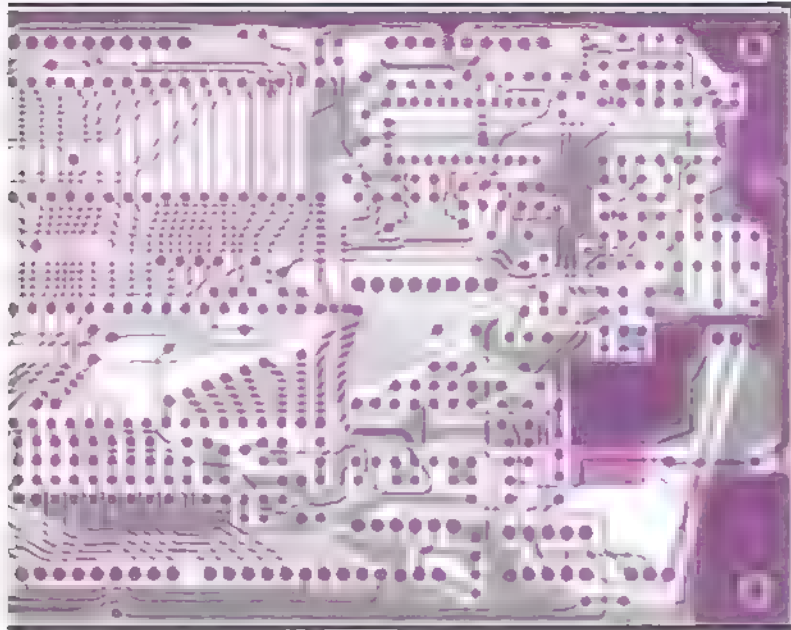
DC VOLTS

	E (S)	C (D)	G (B)	REMARKS		E (S)	C (D)	G (B)	REMARKS
01001	12.3	13.2	13.0		01034	5.00	0.74	5.00	
01002	0	12.2	-0.7		01035	0	0.02	0.02	
01004	0.20	0.21	0.90		01037	0	8.00	0.02	
01005	0.20	4.60	0.21		01038	0	0.01	5.00	
01006	0	0.06	0.66		01039	0	0.10	0.03	
01009	0	5.0	0		01040	0	8.00	0.03	
01010	0	0	0.03		01041	0	4.80	0.04	
01016	0	0.70	0.06		01042	0	0.02	5.00	
01017	0	0.01	4.50		01043	0	7.90	0.03	
01018	0	0.03	4.60		01044	0	7.90	0.03	
01022	0	0.77	0.06		01046	5.0	5.0	4.4	
01023	0	5.00	0.77		01048	5.00	5.00	0.02	
01026	0.04	12.70	0		01049	0	0.02	1.60	
01031	0	5.00	0.01		01055	5.0	0	4.6	
01032	0	5.0	0						

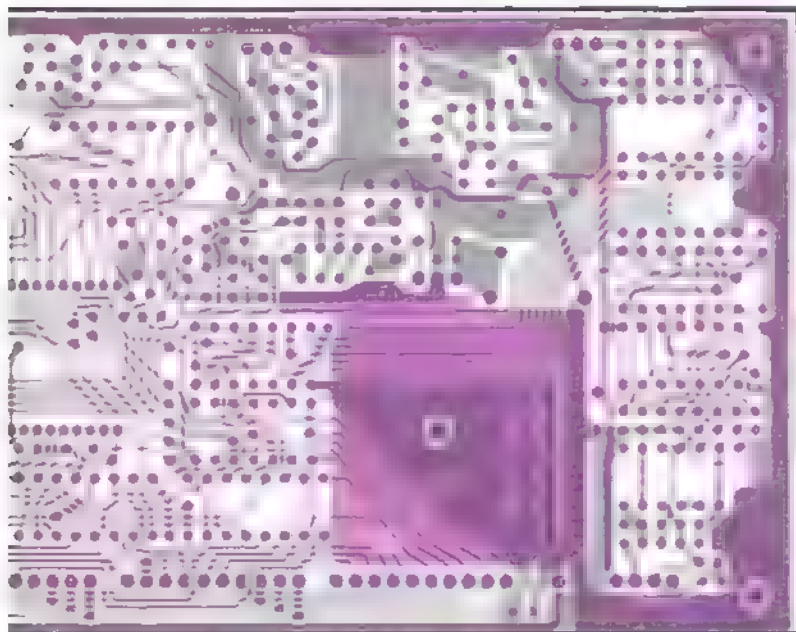
CNTL UNIT IC VOLTA

	IN	20V	30V	4	5	6	7	8	9	10	11
01003	10	0	50								
01007	H	H	L	H	L	0	H	L	L	H	
01012	L	H	L	H	H	0	L	H	H		
01013	H	L	L	L	L	0	L	L	H	L	
01014	H	H	L	H	H	0	L	L	H	H	
01015	L	L	L	L	L	0	L	L	L	L	
01019	H	L	H	H	H	H	0	H	H	H	
01020	H	L	H	L	L	L	0	L	H	L	
01021	L	L	H	L	L	0	L	L	L	H	
01030	L	L	H	L	L	0	L	L	L	L	
01033	0	0.02	0.06	0	0	0.10	1.3	0			
01035	0	0	0	5.00	0.69	0.01	1.90	2.51	2.51	2.45	C
01045	L	L	L	L	L	0	L	L	L	L	
01047	L	H	H	H	H	H	0	H	H	H	

ENTL UNIT PARTS LAYOUT



Chip side (obverse)



Chip side (reverse)

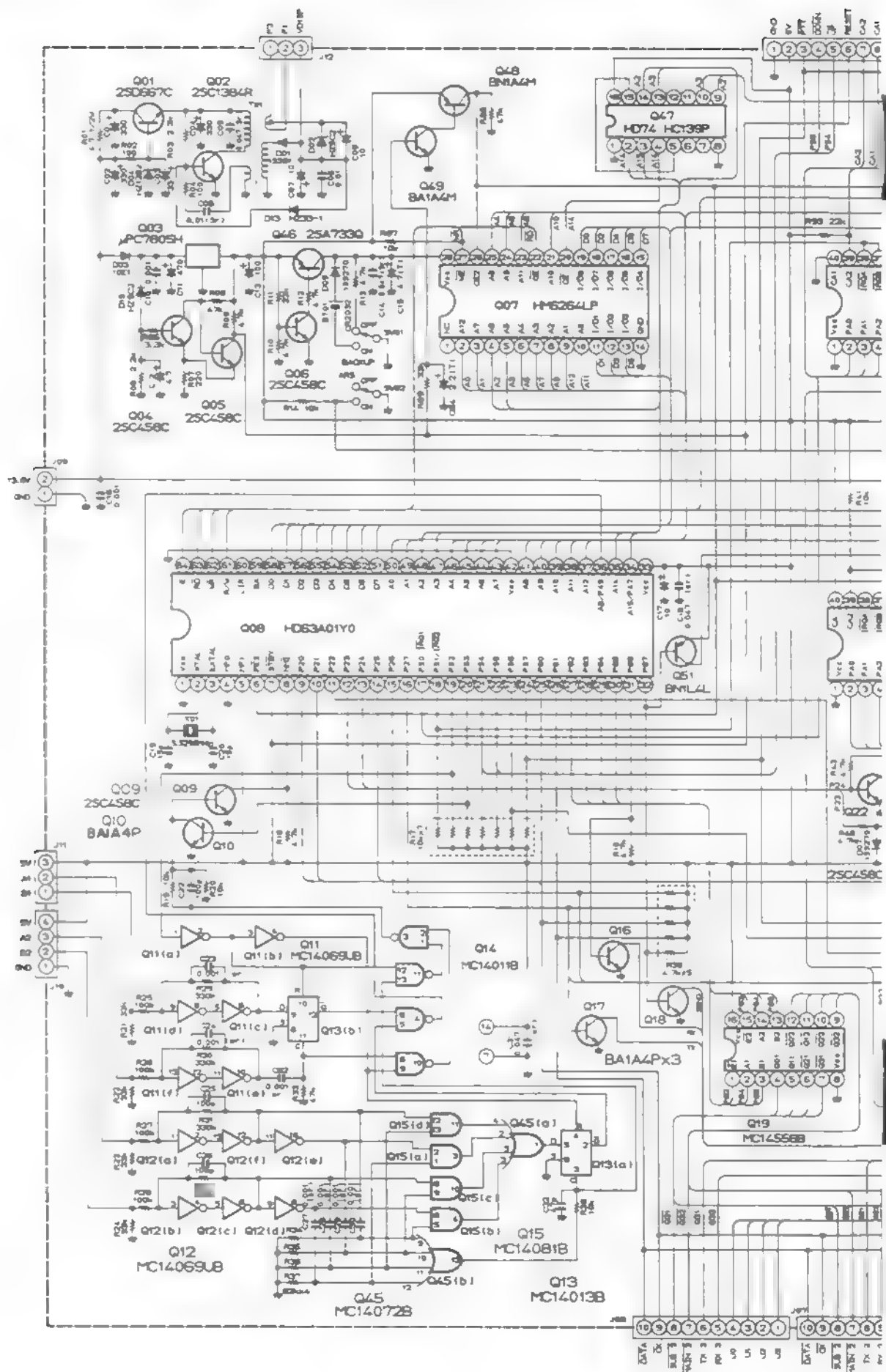
GE CHART

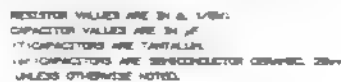
DC VOLTS

12	13	14	15	16	17	18	REMARKS
							H = 50
H		50					L = 0
L	H						
H		50					
H	L	50					
H		50					
H	H	L	H	50			
L	H	L	L	50			
L	L	50					
L	H	50					
250	243	248					
L	L	50					
H	H	H	H	50			

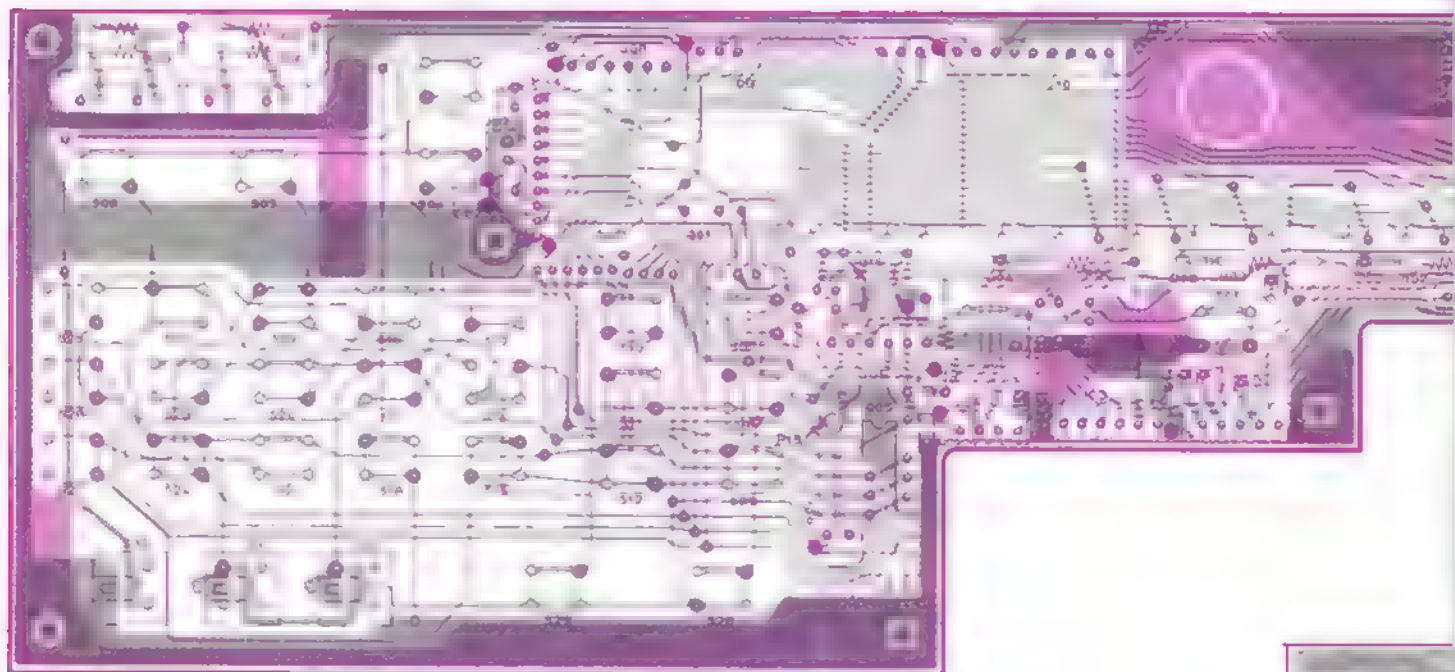
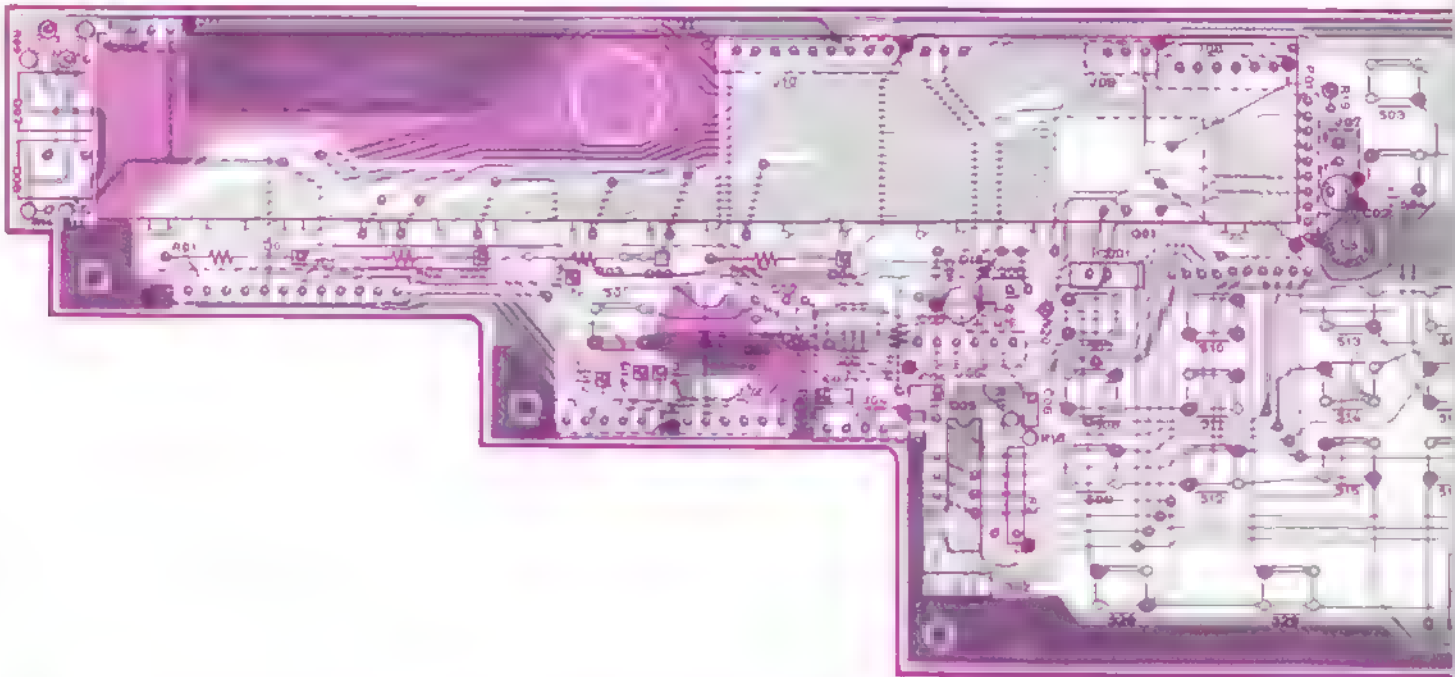
* In the initialize state.

CYTE UNIT DISPLAY I - 33





DISPLAY UNIT (No. 2XXX)

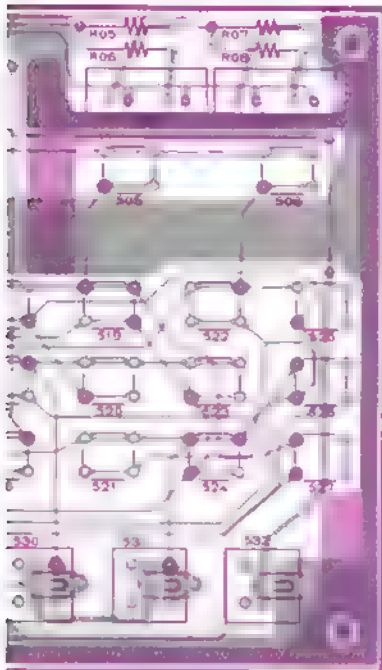


Display side (reverse)

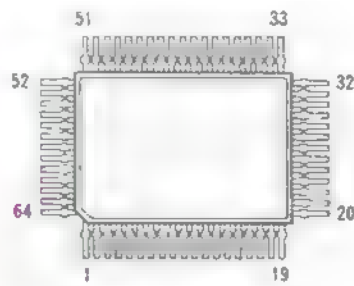


Component s

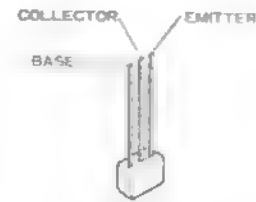
4th PROTECTOR UNIT PARTS LAYOUT



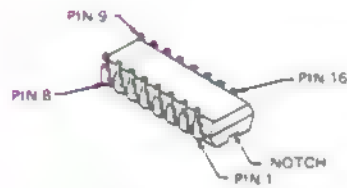
Display side (obverse)



HD614022FH35(Q2001)

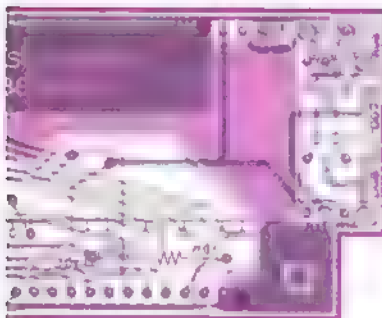


BA1A4P(Q2002-2004)
BN1A4P(Q2006)



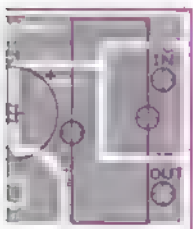
LR4087(Q2005)

PROTECTOR UNIT (No. 7XX)

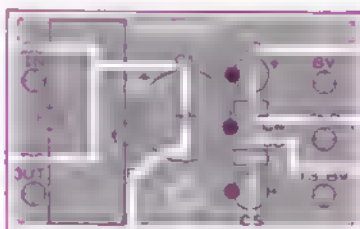


Component side (obverse)

REG UNIT (No. 8XX)



Side (obverse)

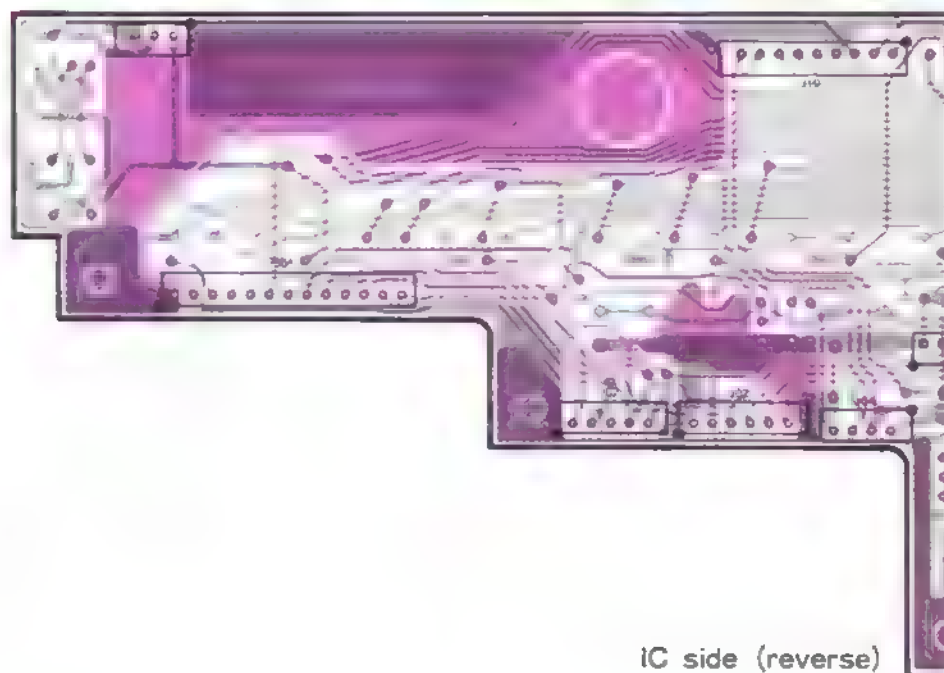
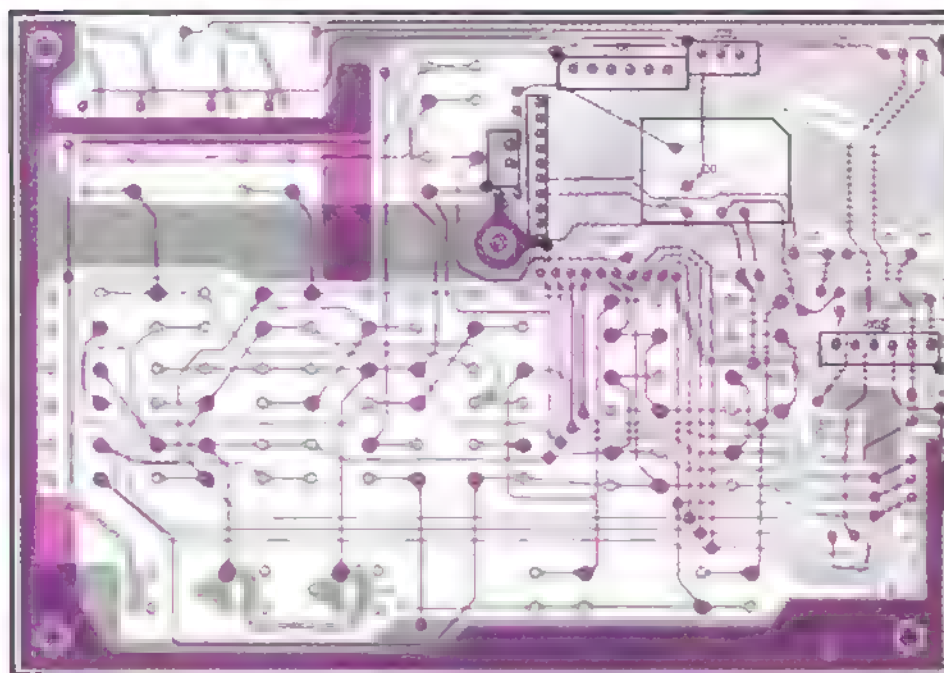


Component side (reverse)



Component side (reverse)

DISPLAY UNIT PARTS LAYOUT



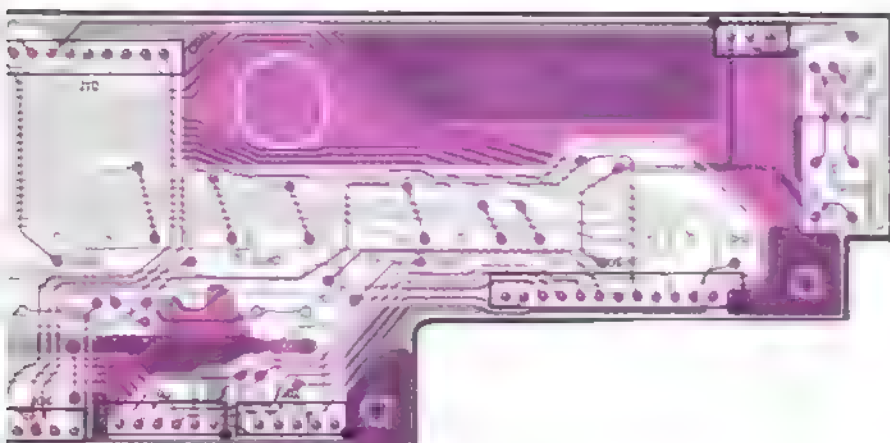
IC side (reverse)

DISPLAY UNIT VOLTAGE CHART

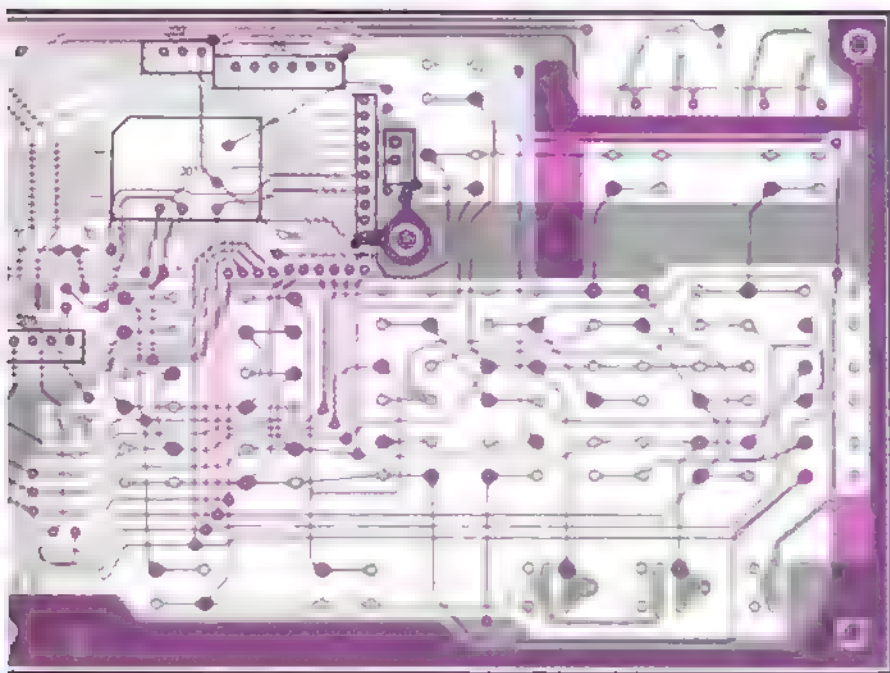
(DC VOLTS)

	E(S)	C/D	G ^B	G ₂	REMARKS		E S	C/D	G ^B	G ₂	REMARKS
Q2002	0	5.0	0			Q2004	0	12.0	0		
Q2003	0	5.0	0			Q2006	0	5.0	0		

※ In the initialize state.



IC side (obverse)



DISPLAY UNIT IC VOLTAGE CHART

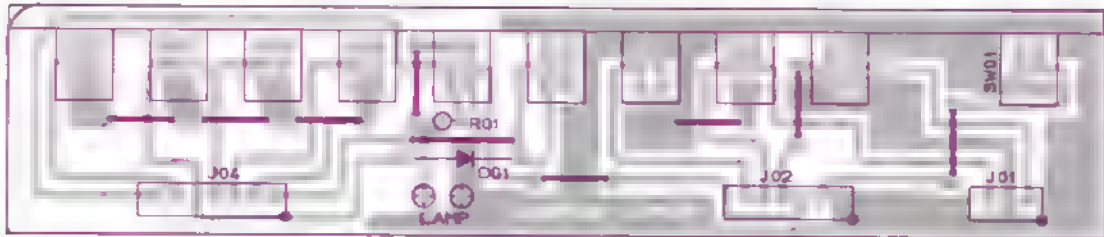
(DC VOLTS)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	REMARKS
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	
	52	53	54	55	56	57	58	59	60	61	62	63	64					
Q2001	-10.50	-32.00	-10.50	-13.60	-16.60	-19.80	-25.80					4.80	-32.20	5.00	5.00	5.00	5.00	
	5.00	5.00	5.00	5.00	0	0.05	0	0.01	5.0	5.00	5.00	5.00	5.00	1.10	1.00	1.05	0.35	
	0.37	0.38	0.38	0	5.00	5.00	5.00	5.00	0	5.00	0.24	2.40	0	5.00	1.10	0.80	1.05	
	-29.20	-29.20	-29.20	-29.20	-29.20	24.00	-29.20	29.20	-29.20	-29.20	-29.20	-29.20	-19.70					
Q2005	5.0	5.0	0	0	0	0	0	5.0	0	0	5.0	5.0	5.0	5.0	5.0	0		

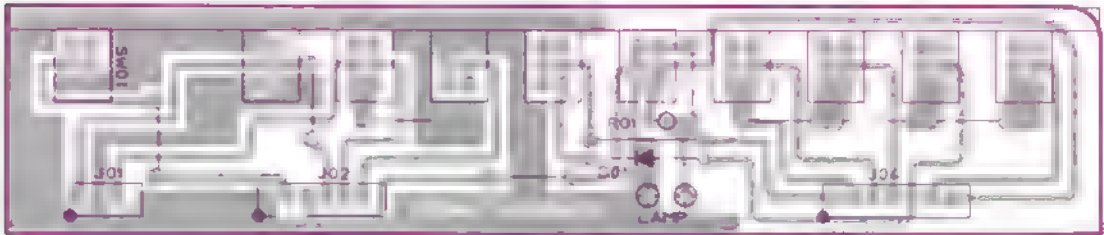


SW ENCODER and VR UNIT PARTS LAY

SW-A UNIT (No. 3XX)



Component side (obverse)



Component side (reverse)

SW-B UNIT (No. 6XX)

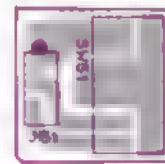


Component side (obverse)



Component side (reverse)

ENCODER UNIT (No. 55X)



Component side (obverse)



Component side (reverse)

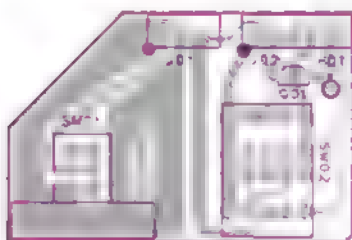
BASE

2SA733

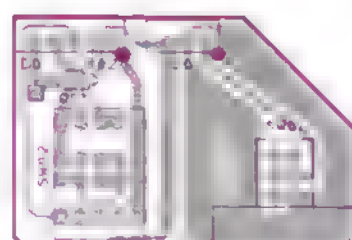
GROUND
OUTPUT

μPC7801
L7809(C)

SW-C UNIT (No. 1XX)



Component side (obverse)



Component side (reverse)



25C342X

* Circuit Diagram is as shown page 25

VR-A UNIT (No. 4XX)

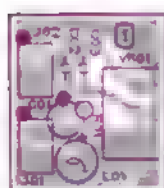


Component side (obverse)



Component side (reverse)

VR-B UNIT (No. 5XX)



Component side (obverse)



Component side (reverse)

VR-D UNIT (No. 9XX)



Component side (obverse)



Component side (reverse)

VR-C UNIT (No. 2XX)



Component side (obverse)



Component side (reverse)

COLLECTOR
EMITTER

4Q(Q101)

INPUT
GROUND

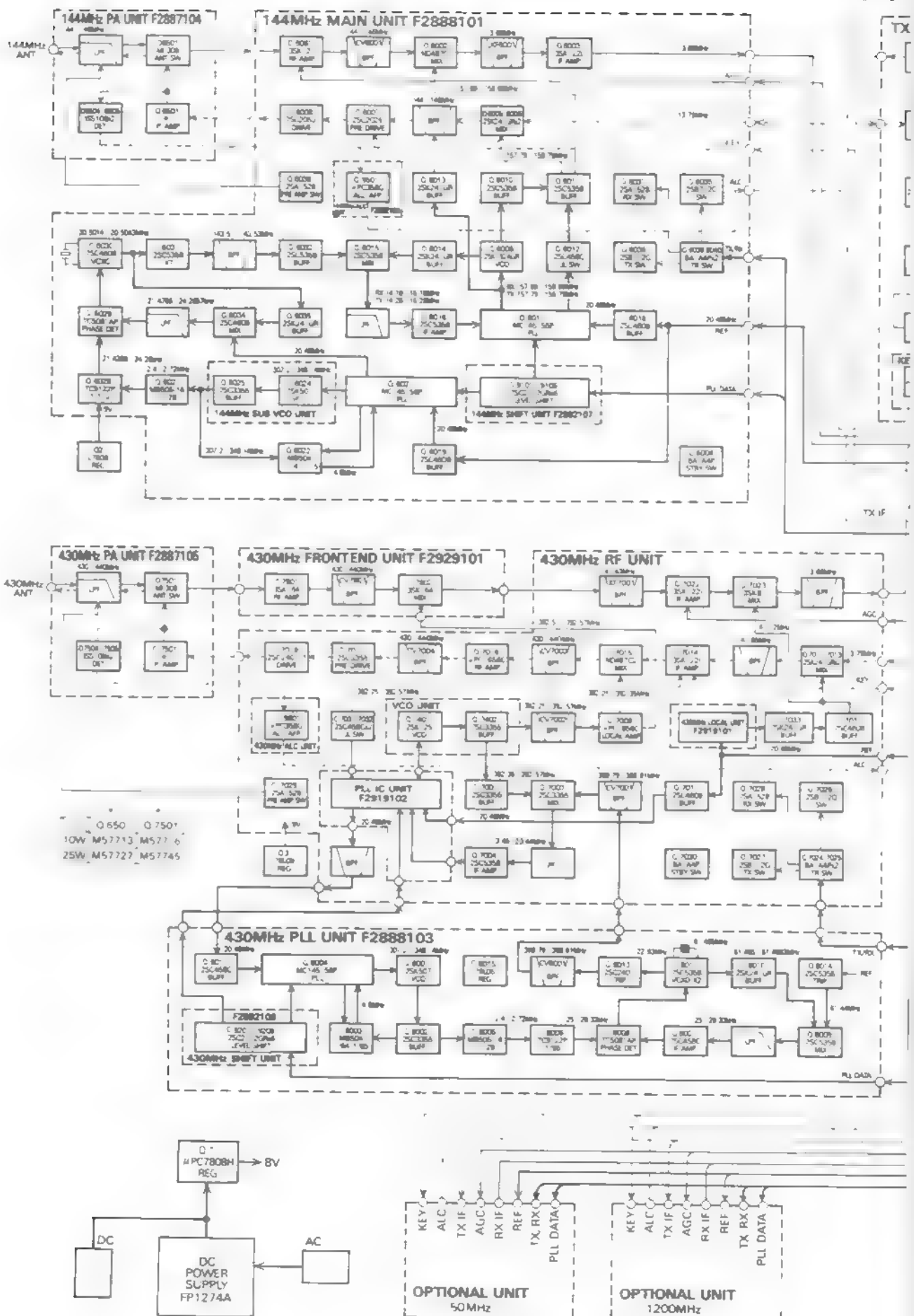
3H(Q1)
2,Q3)

- BASE
COLLECTOR
EMITTER
XGR,Q4)

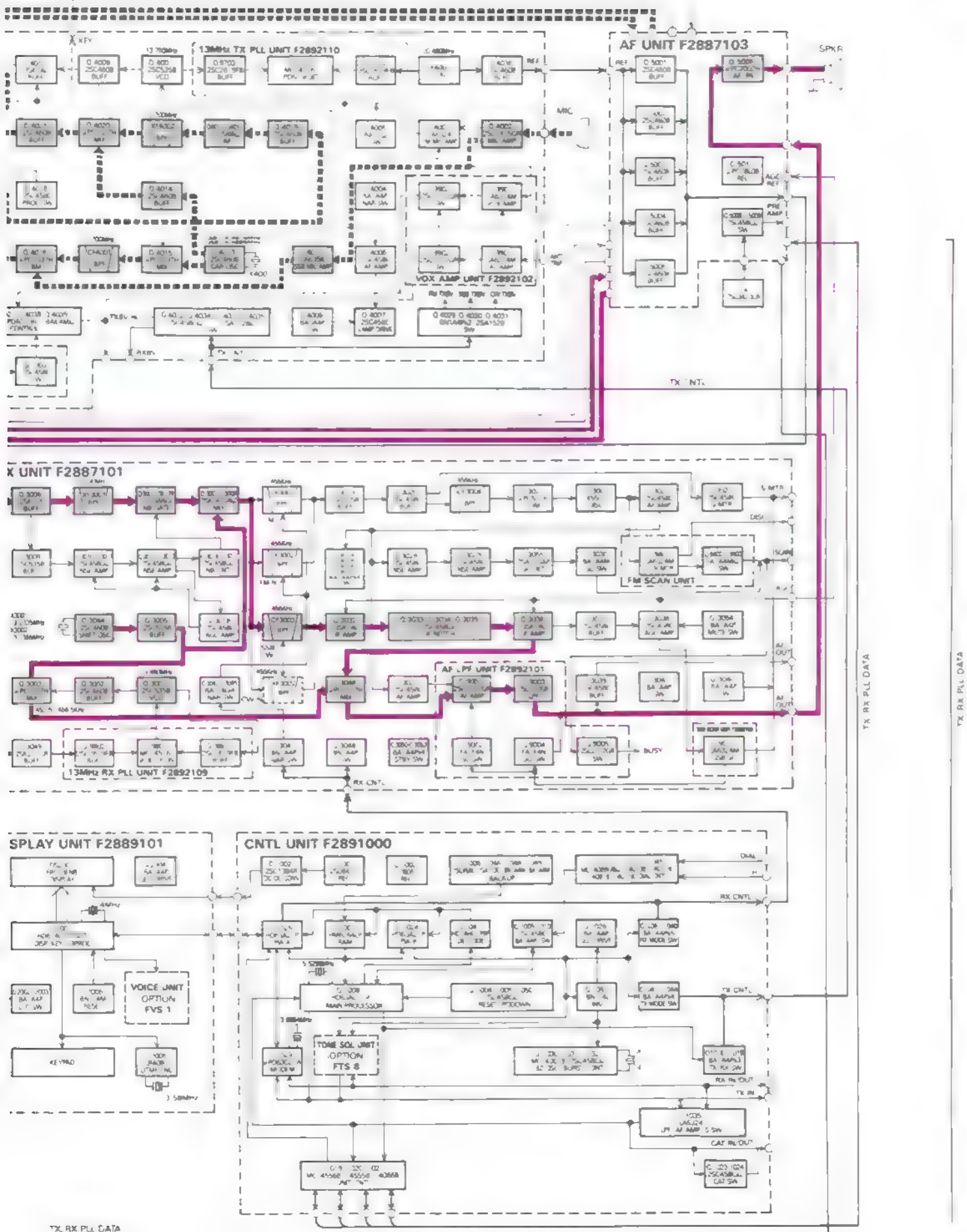
A
L
L

RESISTOR VALUES ARE IN Ω , $k\Omega$, $M\Omega$
CAPACITOR VALUES ARE IN pF
*CAPACITORS ARE "ANALOG"
IF CAPACITORS ARE SEMICONDUCTOR CERAMIC 25V UNLESS OTHERWISE NOTED.

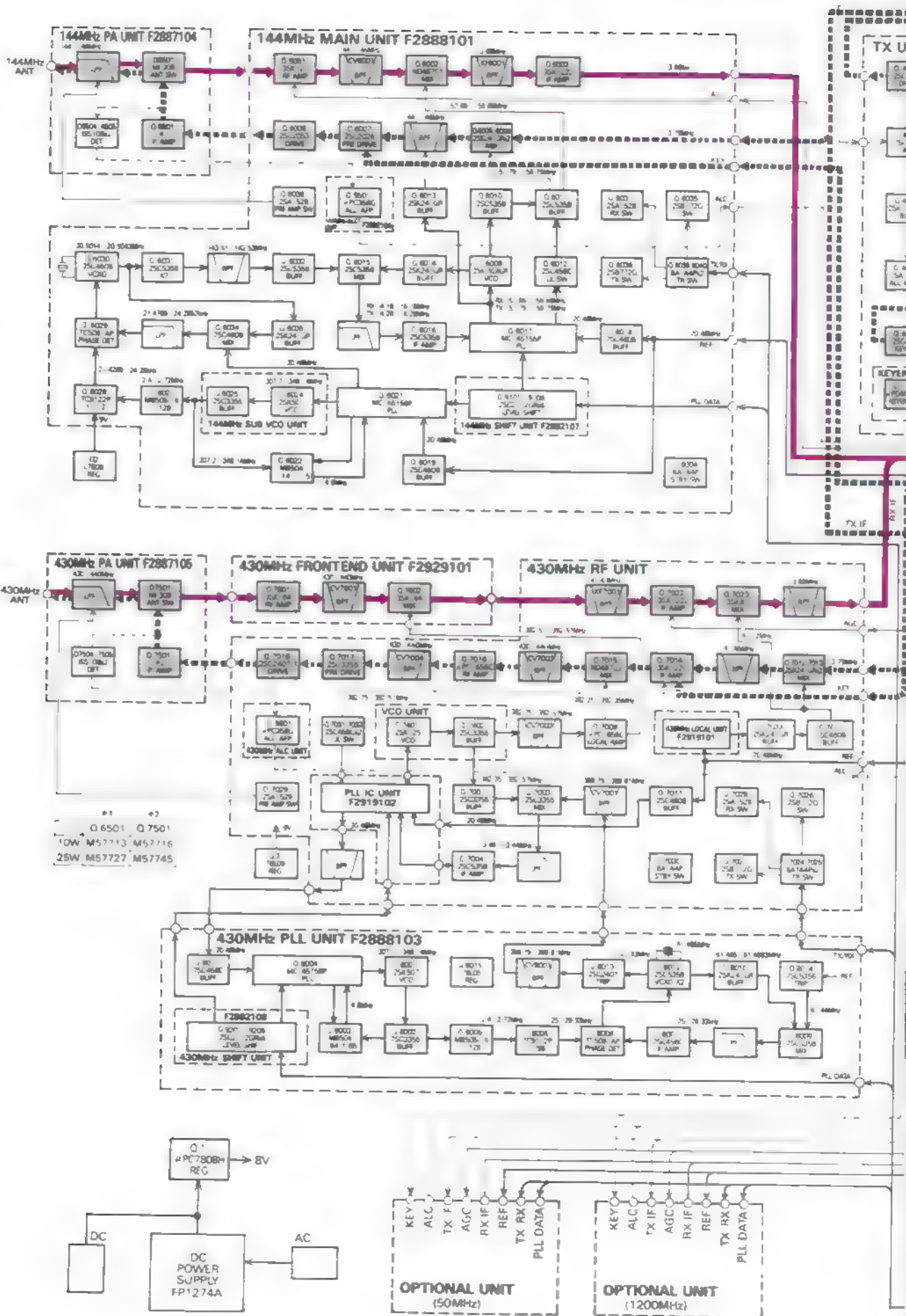
BLOCK DIAGRAM

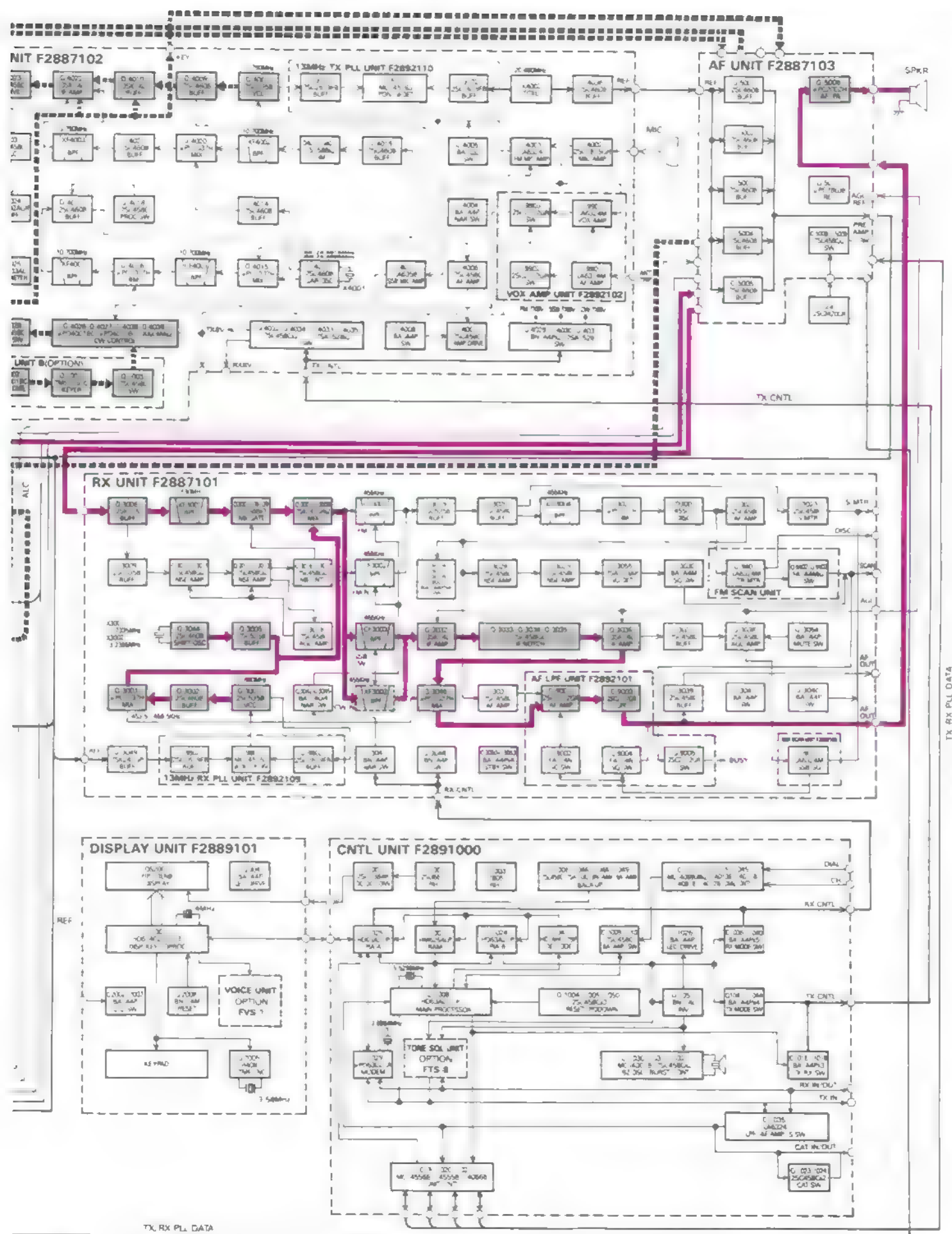


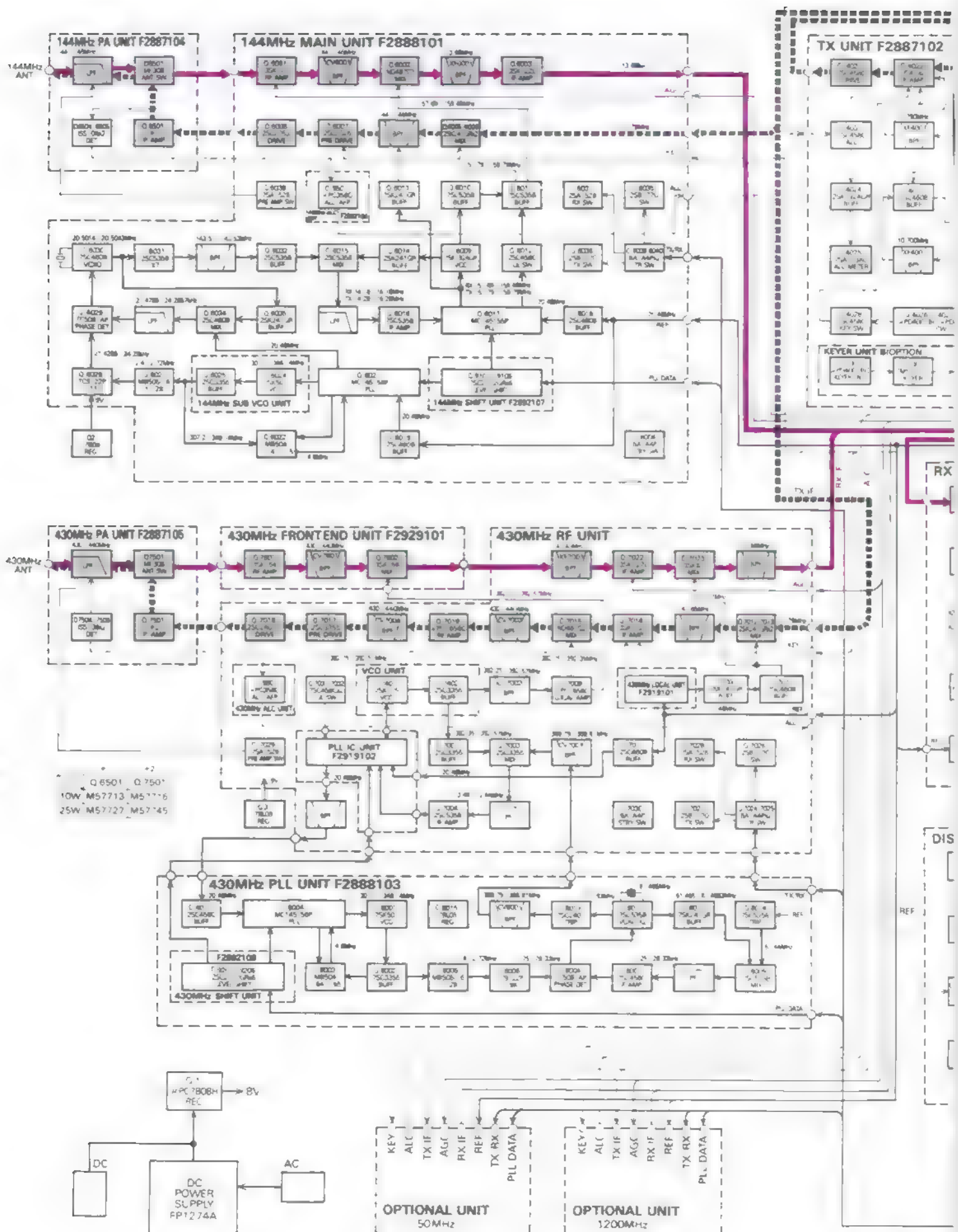
SIGNAL TRACING (SSB MODE)



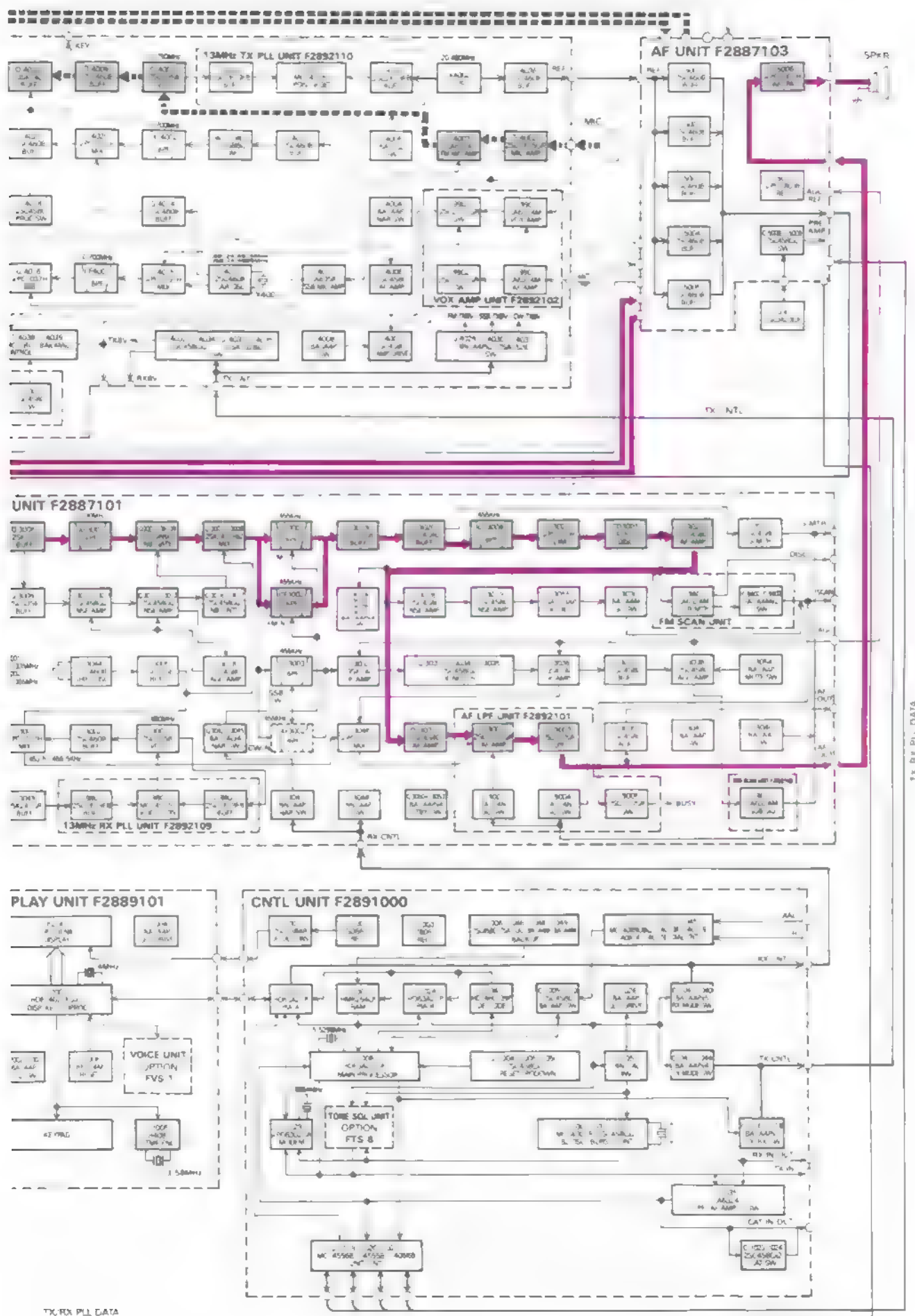
SIGNAL TRACING (CW MODE)







SIGNAL TRACING I FM MODE



TX RX PLL DATA

TX RX PLL DATA

SEMICONDUCTOR CROSS-REFERENCE

MAIN CHASSIS

Symbol No	ORIGINAL Part No	REPLACEMENT Part No	REPLACEMENT Part No	REPLACEMENT Part No
Q4	2SC3420GR	2SC3457		
	33342 KOG	3334570		
Q7	μPC3818M	1608		
	G1090294	G1090777		

AF UNIT

Symbol No	ORIGINAL Part No
Q5008.5009	2SC458C G3304580C

RX UNIT

Symbol No	ORIGINAL Part No	REPLACEMENT Part No	REPLACEMENT Part No	REPLACEMENT Part No
Q3030	BA 44M	2SC3402		
	G3090074	G3304020		
Q3005.3006.3028.3030 3034.3035.3037.3038 3039.3040.3041.3042 3043.3044.3045.3046 3047.3049.3050.3051 3052	1SS270 G2090408	1SS53 G2090027		
Q3035.3048	SS2707 G2060004	SS537 G2060002		

144MHz MAIN UNIT

Symbol No	ORIGINAL Part No
Q5035.6036	2SB7720 G32077200
Q6012	2SC458C G3304580C
Q6001.6014.6015.6020 6021.6022.6023.6024 6025.6026.6027.6028 6029.6030.6031	SS270 G2090408
Q6032	SS2707 G2060004

AF LPF UNIT

Symbol No	ORIGINAL Part No	REPLACEMENT Part No	REPLACEMENT Part No	REPLACEMENT Part No
Q9001.9002.9003. 9004.9005	2SC272GR TE85R G332727G	2SC1623 L6 L7 G3316237 F/G	2SC2812 L6 L7 G3328127 F/G	2SC2462 C/LD G3324627 C/D

144MHz ALC UNIT

Symbol No	ORIGINAL Part No
D9501.9502	SS181 TE85R G207000

FM SCAN UNIT

Symbol No	ORIGINAL Part No	REPLACEMENT Part No	REPLACEMENT Part No	REPLACEMENT Part No
D940	SS 84 TE85R G2070009	OC80 9 TA G2070012	MC2834 T4 2 G2070015	

144MHz SHIFT UNIT

Symbol No	ORIGINAL Part No
Q910.9102.9103 9104.9105.9106	2SC272GR TE85R G33271270

SSB SCAN UNIT

Symbol No	ORIGINAL Part No	REPLACEMENT Part No	REPLACEMENT Part No	REPLACEMENT Part No
D9301	1SS184 TE85R G2070009	LSO 5 TA G2070012	MC2838 T4 2 G2070015	

TX UNIT

Symbol No	ORIGINAL Part No	REPLACEMENT Part No	REPLACEMENT Part No	REPLACEMENT Part No
Q4032.4034	2SC458C G3304580C	2SC945AP G3309451P		
Q4005	BA132 G3090077	2SC390 G333900		
Q4038.4039	BA 44M G3090080	2SC3399 G3333990		
Q4003	LA6324 G1090645	μPC324C G1090230	M5224P G1090757	
Q4026	μPD4001BC G1090278	MC14001BCP G1090027		
Q4027	μPD401 BC G1090282	MC1401 BCP G1090068		
D4003.4004.4006.4007 4008.4014.4017.4018 4019.4022	SS270 G2090408	SS53 G2090027		
D4023	SS2707 G2060004	SS537 G2060002		

430MHz RF UNIT

Symbol No	ORIGINAL Part No
Q7026.7027	2SB7720 G32077200
Q7031.7032	2SC458C G3304580C
Q7003.7014.7015 7016.7017.7018	SS270 G2090408
Q7006.7011	SS2707 G2060004

430MHz ALC UNIT

Symbol No	ORIGINAL Part No
D9601.9602	SS181 TE85R G2070001

430MHz PLL UNIT

Symbol No	ORIGINAL Part No
D8004.8005.8006.8007 8008.8009.8010.8011	1SS270 G2090408

430MHz SHIFT UNIT

Symbol No	ORIGINAL Part No
Q9201.9202.9203 9204.9205.9206	2SC272GR TE85R G3327127G

VOX UNIT

Symbol No	ORIGINAL Part No	REPLACEMENT Part No	REPLACEMENT Part No	REPLACEMENT Part No
Q9902.9903	2SC272GR TE85R G3327127G	2SC1623 L6 L7 G3316237 F/G	2SC2812 L6 L7 G3328127 F/G	2SC2462 C/LD G3324627 C/D

REPLACEMENT	REPLACEMENT	REPLACEMENT
Part No.	Part No.	Part No.
2SC945AP		
Q3309451P		

REPLACEMENT	REPLACEMENT	REPLACEMENT
Part No.	Part No.	Part No.
2SA7 50		
G3107 50C		
2SC945AP		
Q330945 P		
SS53		
G2090027		
SS53T		
G2060004		

REPLACEMENT	REPLACEMENT	REPLACEMENT
Part No.	Part No.	Part No.
MC2818 4-2		
G2070024		

REPLACEMENT	REPLACEMENT	REPLACEMENT
Part No.	Part No.	Part No.
2SC1623 L6/L7	2SC2812 L6/L7	2SC2462 LC/LD
Q3316237 F/G	G3328127 F/G	Q3324627 G/D

REPLACEMENT	REPLACEMENT	REPLACEMENT
Part No.	Part No.	Part No.
2SA7 50		
G3107 50C		
2SC945AP		
Q330945 P		
SS53		
G2090027		
SS53T		
G2060002		

REPLACEMENT	REPLACEMENT	REPLACEMENT
Part No.	Part No.	Part No.
MC2816 114 2		
G2070024		

REPLACEMENT	REPLACEMENT	REPLACEMENT
Part No.	Part No.	Part No.
SS53		
G2090027		

REPLACEMENT	REPLACEMENT	REPLACEMENT
Part No.	Part No.	Part No.
2SC1623 L6/L7	2SC2812 L6/L7	2SC2462 LC/LD
Q3316237 F/G	G3328127 F/G	Q3324627 G/D

○ CNTL UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q 004 105 106 109	2SC458C	2SC945AP		
002 023.1050	G3304580C	G330945 P		
Q1002	2SC 44P	2SC945P		
	G33 3843P	G336670C		
Q1049	2SA 44M	2SC3402		
	G3090074	G3334020		
Q1048	BN 44M	2SA1348		
	G3090081	G3117480		
Q1007	HM6264ALP-2	HM6264ALP-15	HM6264 P	HM6264ALP-10
	G090878	G 090819	G1190791	G 090880
Q1035	A6324	WPC324C	W5224P	
	G 090646	G1090230	G 090757	
Q 030	MC14001BCP	WPC400 BC		
	G 0900027	G 090278		
Q1044	MC 4001BCP	WPC401 BC		
	G1090068	G 090282		
Q 013	MC14113BCP	WPC401 3BC		
	G 0900067	G 090280		
Q1021	MC 40056BCP	WPC4066BC		
	G 090257	G 090283		
Q 015	MC 408 BC	WPC408 BC		
	G 090053	G 090658		
Q1003	WPC1805H	L1805		
	G 090299	G 090716		
Q1005 1006 1007 1008	SS270	SS53		
1009 1010 1011 1012	G2090408	G2090027		

○ DISPLAY UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q2006	BN1 4M	2SA1345		
	G3090084	G3113450		
Q2010	SS270	SS53		
	G2090408	G2090027		

○ VR C UNIT

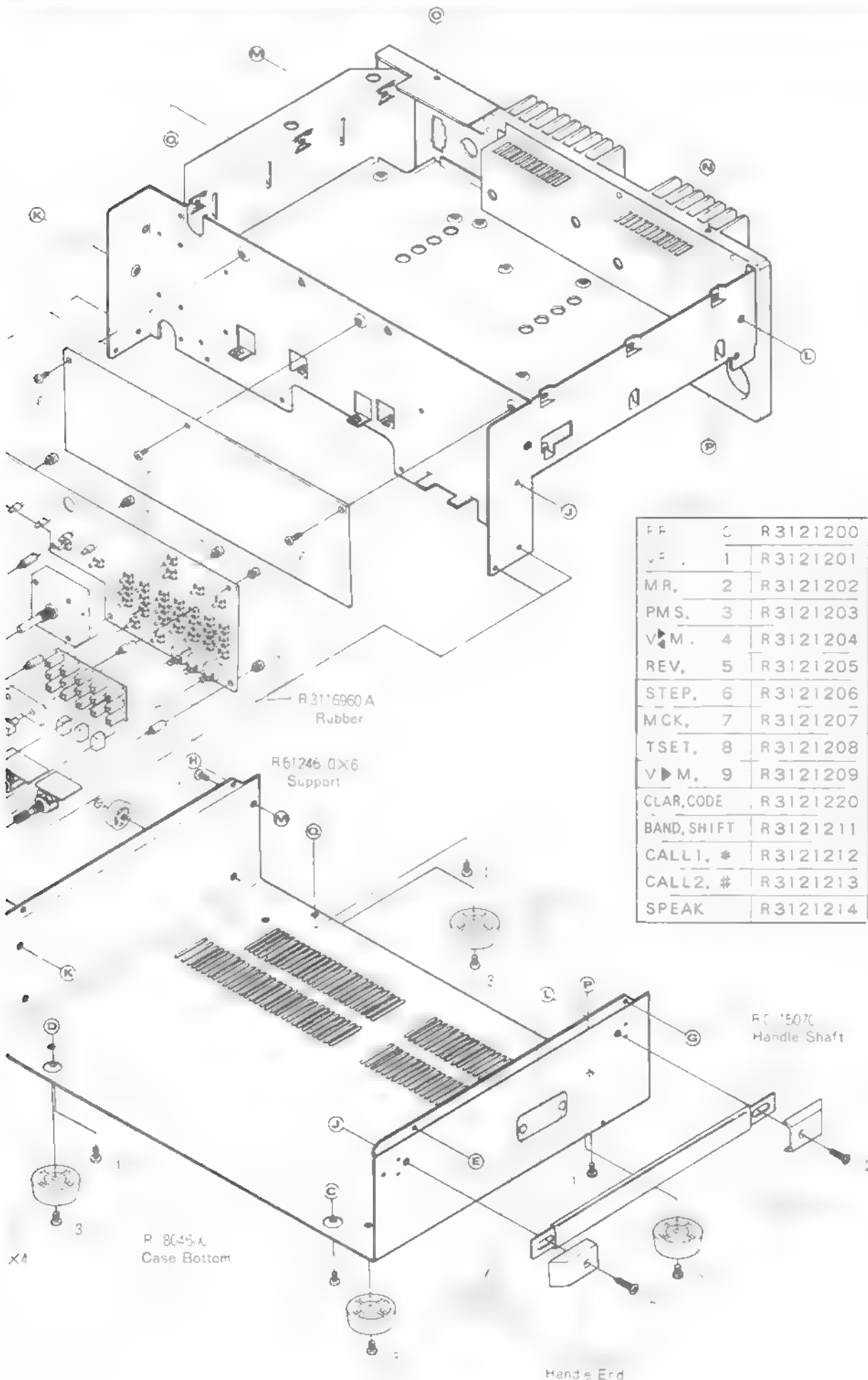
Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q201	SS270	SS53		
	G2090408	G2090027		

○ SW A UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q301	SS270	SS53		
	G2090408	G2090027		



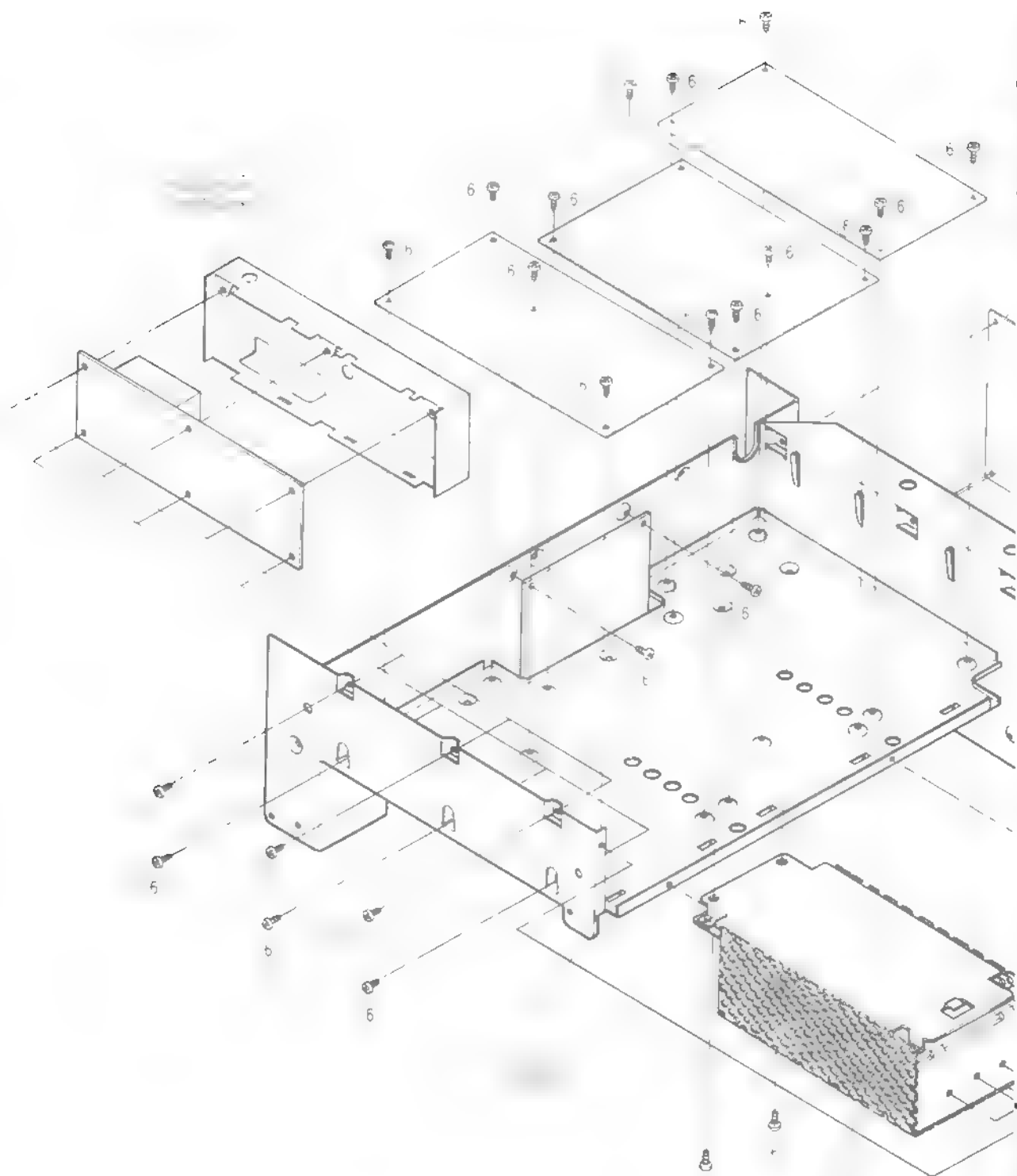
EXPLODED VIEW



FF	C	R3121200
VF	1	R3121201
MR	2	R3121202
PMS	3	R3121203
V M	4	R3121204
REV	5	R3121205
STEP	6	R3121206
MCK	7	R3121207
TSET	8	R3121208
V M	9	R3121209
CLAR CODE		R3121220
BAND SHIFT		R3121211
CALL1 *		R3121212
CALL2 #		R3121213
SPEAK		R3121214



EXPLODED VIEW



SCREW LIST		
Ret No.	Parts No.	Description
①	U20406007	BINDING HEAD SCREW M4X6B
②	U31414002	OVAL HEAD SCREW M4X14 N1
③	U00406001	PAN HEAD SCREW M4X6
4	U20306007	BINDING HEAD SCREW M3X6B
5	U20306001	BINDING HEAD SCREW M3X6
6	U42306201	TAPPING SCREW 3 ϕ X6
7	U02306001	SEMS SCREW SM3X6
8	U00306001	PAN HEAD SCREW M3X6
9	U00314001	PAN HEAD SCREW M3X14
	U40308201	TAPPING SCREW 3 ϕ X8

Field Case PA

554J591A

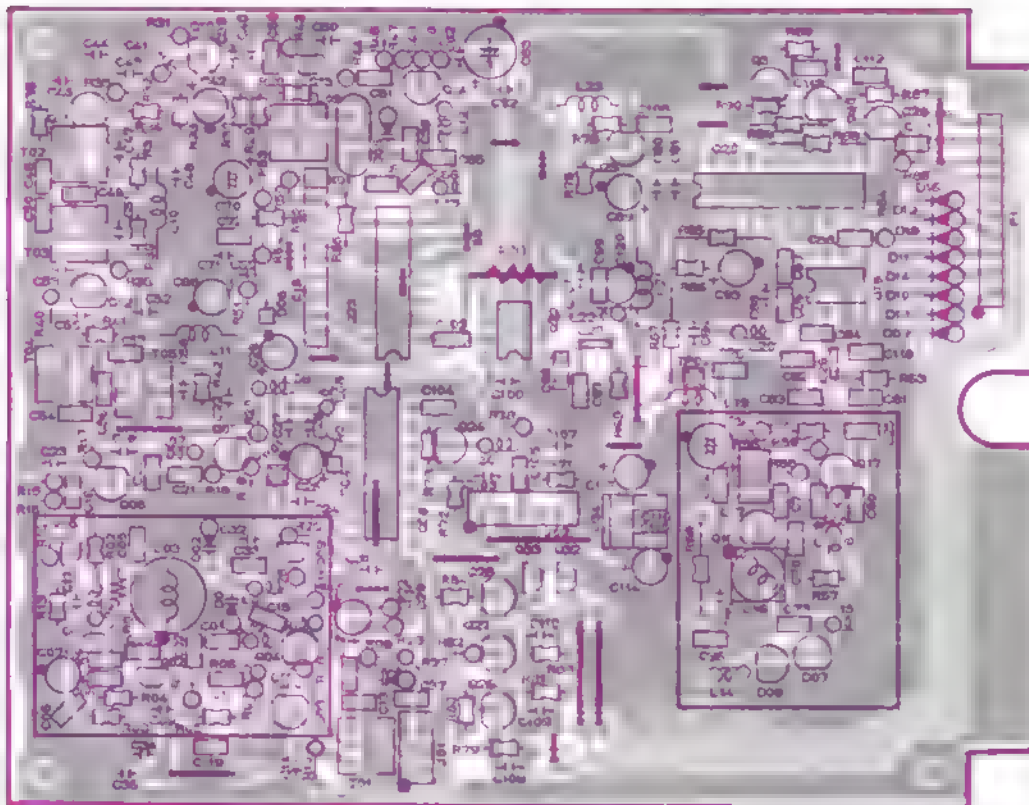
Connector

900X18 Terminal

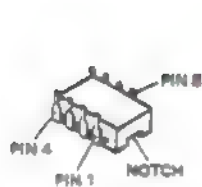
792m54cA

2	U31414002	OVAL HEAD SCREW M4X14 N1
3	U00406001	PAN HEAD SCREW M4X6
4	U20306007	BINDING HEAD SCREW M3X6B
5	U20306001	BINDING HEAD SCREW M3X6
6	U42306201	TAPPING SCREW 3#X6
7	U02306001	SEMS SCREW SM3X6
8	U00306001	PAN HEAD SCREW M3X6
9	U00314001	PAN HEAD SCREW M3X14
	U40308201	TAPPING SCREW 3#X8

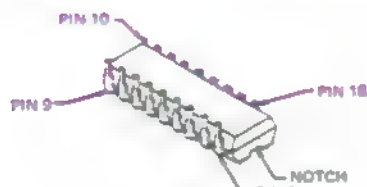
50MHz PLL UNIT (No. 1XXX)



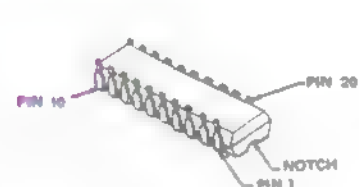
Component side (obverse)



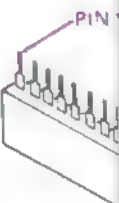
MB504 (Q1019)
MB505-16 (Q1022)



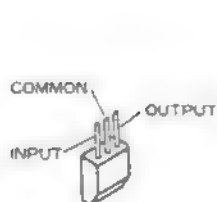
MC145156P (Q1008)
TC9122P (Q1023)



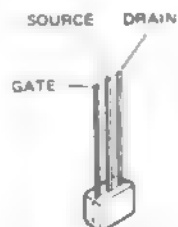
MC145156P (Q1020)



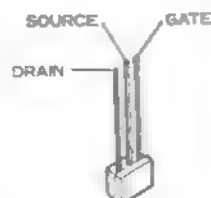
TC5081AF



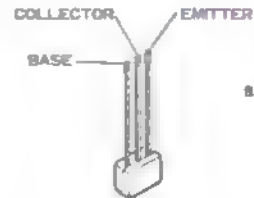
μPC78L05 (Q1034)



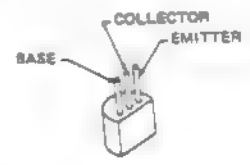
2SK241GR
(Q1009, 1013)



2SK507F (Q1016)



BA1A4P
(Q1032, 1033)



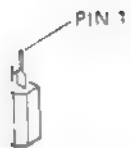
2SC458
(Q1026, 1027, 1028)
1029, 1030, 1031
2SC460B
(Q1006, 1007, 1010)
1011, 1012, 1024
1025
2SC535B (Q1014)



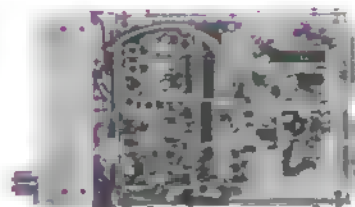
2SC3355



Component side (reverse)



Q1015

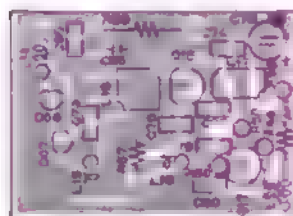


50MHz SUB
VCO UNIT

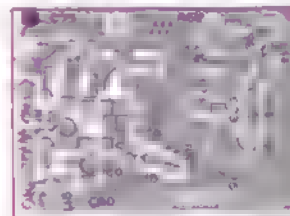
50MHz SUB VCO UNIT (No. 1XXX)



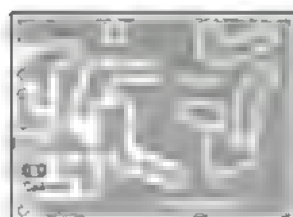
(Q1017)



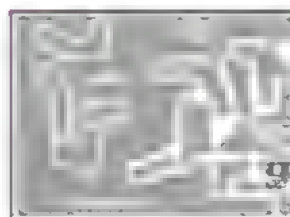
Component side (obverse)



Component side (reverse)



Chip side (obverse)



Chip side (reverse)

(DC VOLTS

	E.S	C/D	G ^B	REMARKS		E S	C/D	G ^B	REMARKS
Q1001	061	853	0		Q1016	0	877	120	
Q1002	0	310	0		Q1017	126	770	200	
Q1003	156	864	223		Q1024	0	567	072	
Q1004	0	007	071		Q1025	0	567	072	
Q1005	0	357	0		Q1026	0	007	067	
Q1006	097	584	164		Q1027	0	007	067	
Q1007	074	541	146		Q1028	0	007	067	
Q1009	617	856	538		Q1029	0	007	067	
Q1010	237	771	300		Q1030	0	007	067	
Q1011	116	871	173		Q1031	0	007	067	
Q1012	098	874	167		Q1032	0	014/879	479.0	RX/TX
Q1013	0	419	0		Q1033	0	873/027	478.0	RX/TX
Q1014	099	565	170						



Solder side (reverse)

50MHz PLL UNIT IC VOLTAGE CHART

(DC VOLTS)

	1 (IN)	2 (OUT)	3 (GND)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
Q1008	8.57	0	-	-	8.56	5.22	0	8.49	3.92	0.09	0.09	0.09	-	-	-	-	3.97	0	-	-	-
Q1015	3.32	3.30	2.78	-	7.57	-	3.32	0.79	0	-	-	-	-	-	-	-	-	-	-	-	-
Q1019	2.53	5.02	0	2.91	-	4.45	-	2.52	-	-	-	-	-	-	-	-	-	-	-	-	-
Q1020	0	5.02	-	-	5.03	1.62	0	4.45	-	1.98	0.72	0.07	0.06	0.03	-	-	2.53	-	2.04	5.03	-
Q1022	2.46	5.03	5.03	2.70	0	-	-	2.46	-	-	-	-	-	-	-	-	-	-	-	-	-
Q1023	7.56	3.11	0	0.02	0.02	7.56	0	0	7.56	0	0	0	0	0	0	0	0.79	0	-	-	-
Q1034	9.00	0	5.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TO : SMC LTD

YMF-00730 / 27

ATTN : MR. GRAHAM TYLAR

RE : MODIFICATION FOR POWER ON UNLOCK WITH 50MHZ UNIT IN FT-736R

INSTALL A 2.2 K-OHMS RESISTOR BETWEEN THE JUNCTION OF T04, R41 AND C55,
AND THE COLLECTOR OF Q12 ON THE PLL UNIT.

AFTER ABOVE MODIFICATION, ADJUST THE CORE OF T02 TO T05 FOR THE
MAIXIMUM LEVEL.

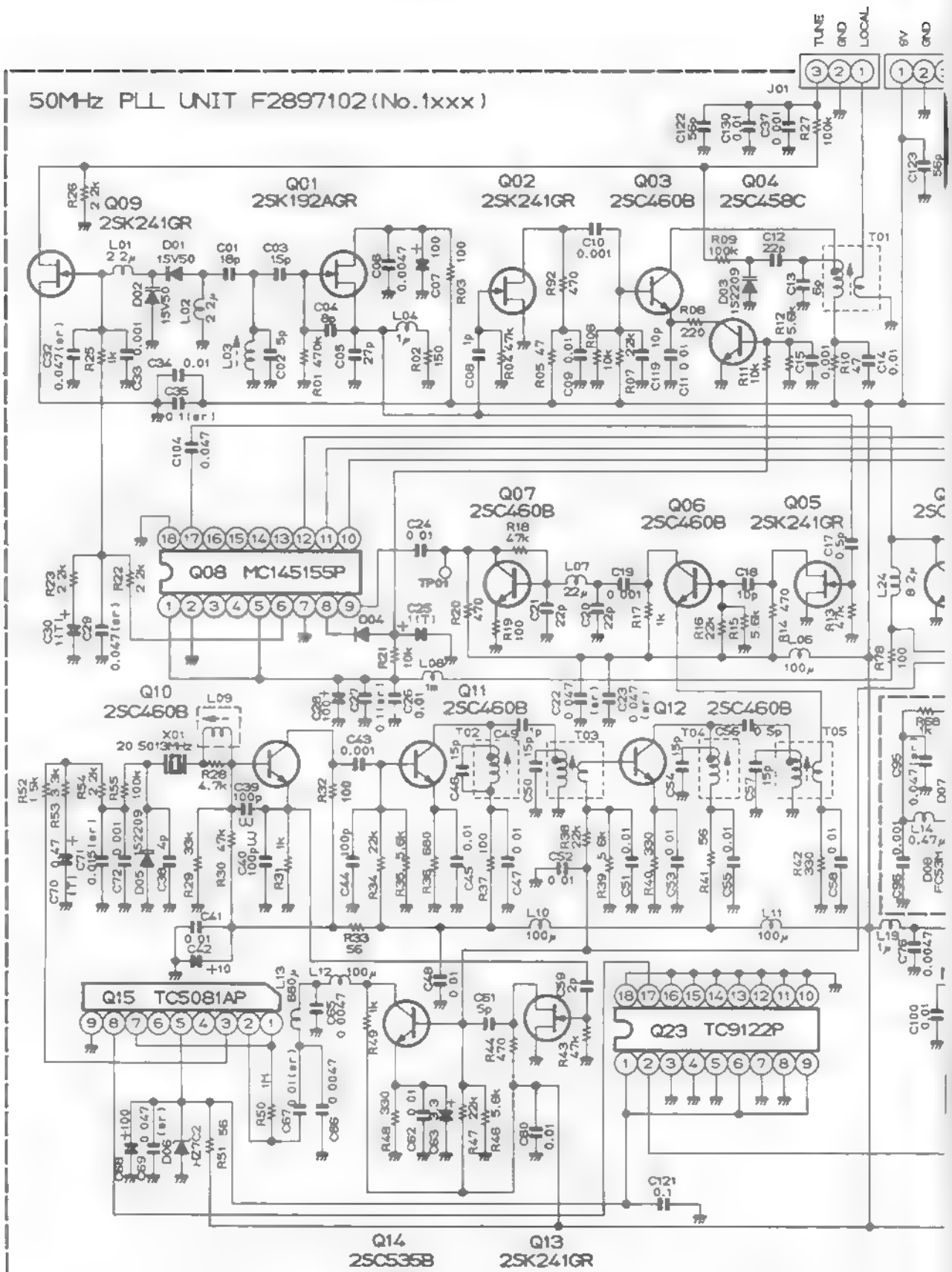
PLEASE REFER TO THE FOLLOWING FAX.

BEST REGARDS,

YAESU MUSEN CO., LTD.

T. TANAKA

50MHz PLL UNIT F2897102 (No.1xxx)

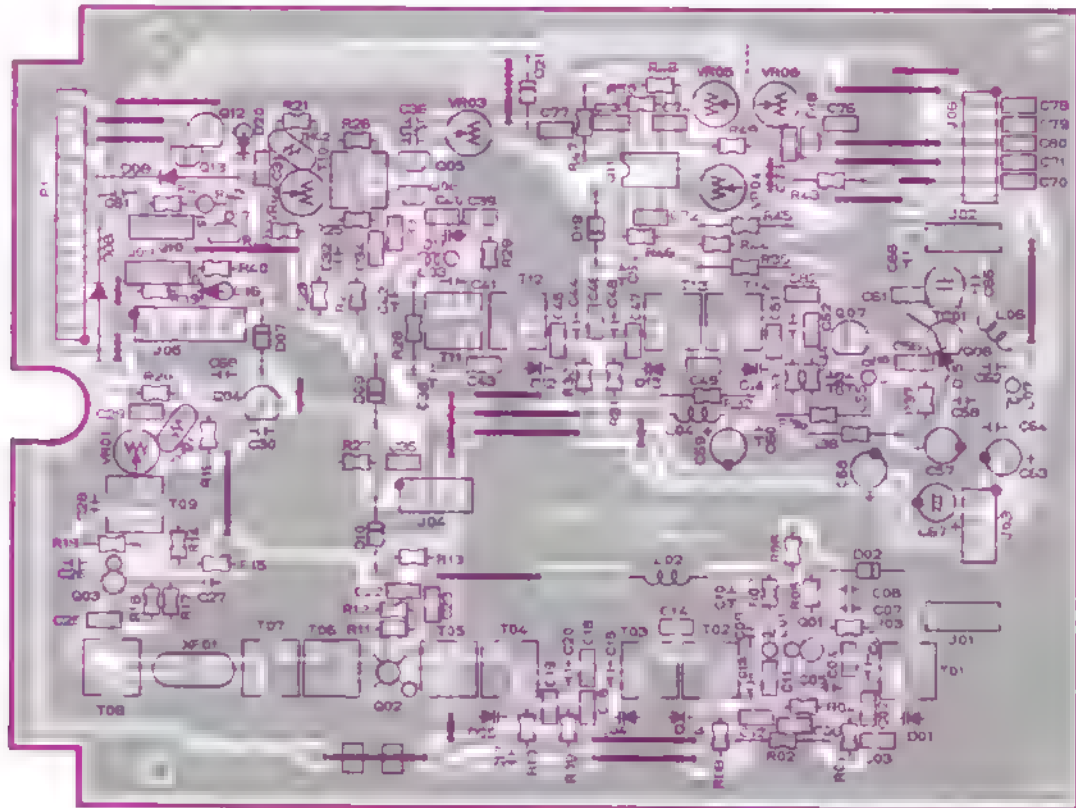


RESISTOR VALUES ARE IN Ω , 1/K Ω ,
CAPACITOR VALUES ARE IN μ F,
INDUCTOR VALUES ARE IN HENRIES, UNLESS OTHERWISE NOTED.

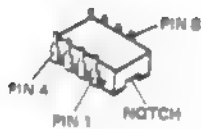


50MHz BAND MODULE (FEX 736-50)

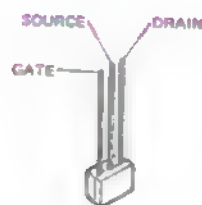
50MHz RF UNIT (No. 2XXX)



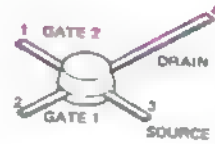
Component side (obverse)



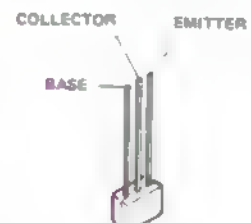
LA6358 (Q2011)



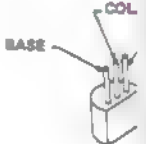
2SK241GR
(Q2004, 2005)



3SK122L (Q2003)



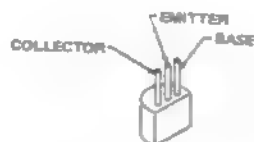
BA1A4P (Q2013)



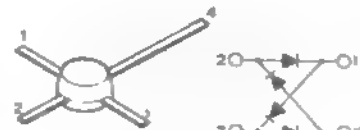
2SA15
(Q20)



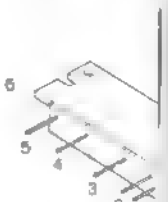
2SB772Q
(Q2009, 2010)



2SC2026 (Q2007)
2SC2538 (Q2008)



ND48701-3R (Q2002)

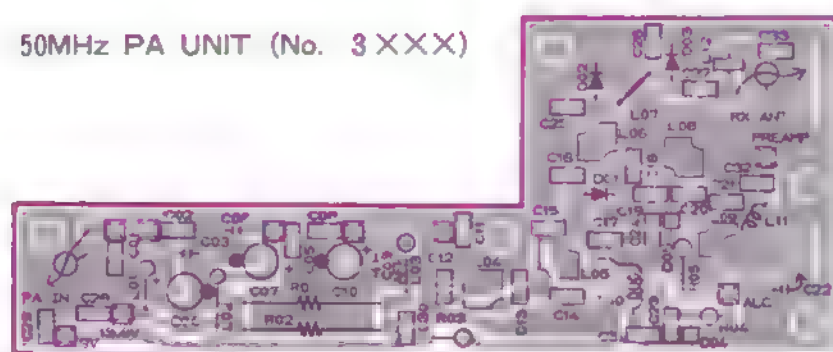


M57735 (G)

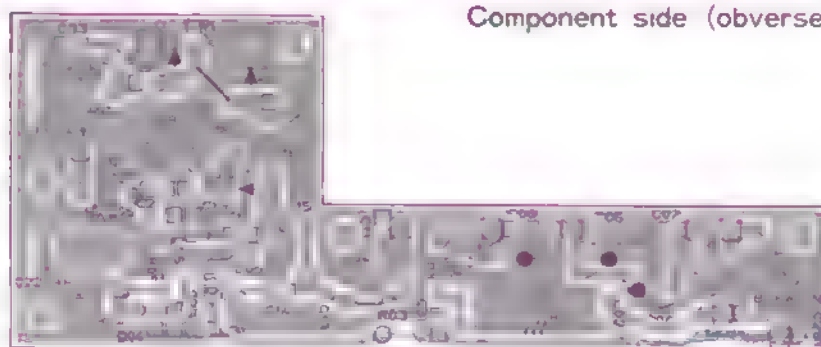


Component side (reverse)

50MHz PA UNIT (No. 3XXX)

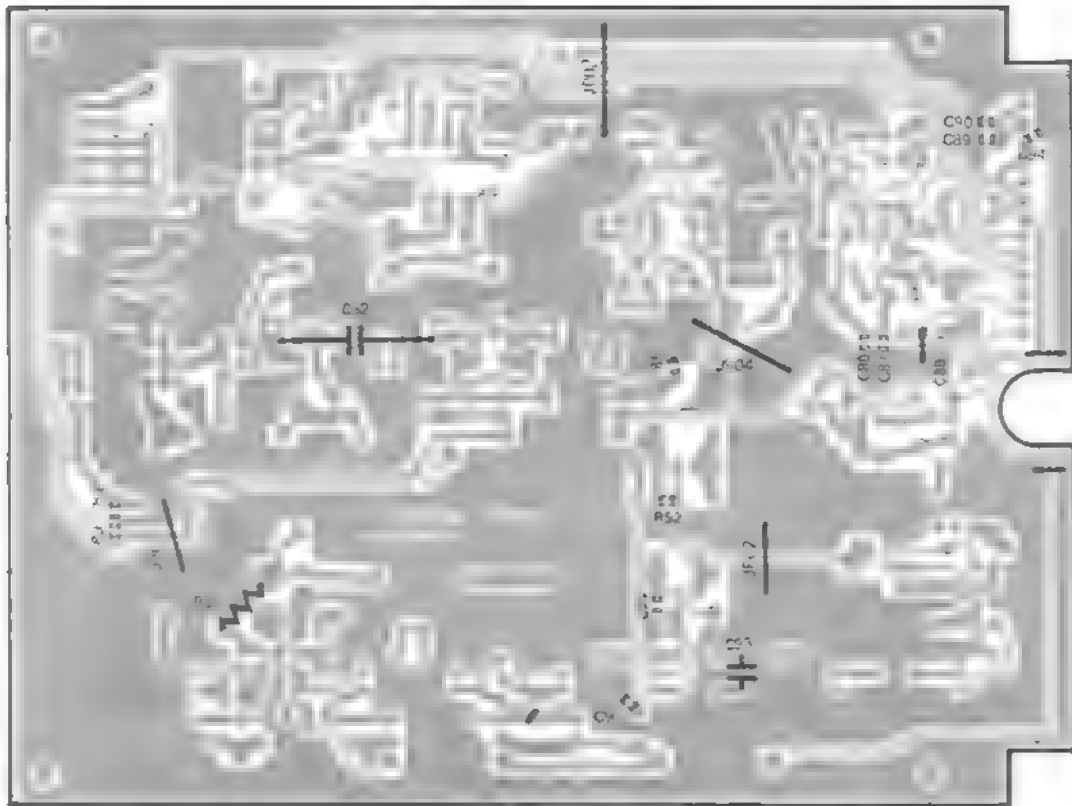


Component side (obverse)



Component side (reverse)

1. INPUT
2. V_{CC1}
3. V_{CC2}
4. V_{CC3}
5. OUTPUT
6. F_{LA}



Solder side (obverse)

50MHz RF UNIT VOLTAGE CHART (DC VOLTS)

	E/S	C.D1	G ₁	B ₁	G ₂	REMARKS
Q2001	1.24	8.50	1.07	1.99		
Q2003	0.61	8.34	0.61	4.44		
Q2004	9.00	8.93/0.02	8.80/8.96			RX/TX
Q2005	0.95	8.94	0.05			
Q2006	0.95	8.94	0.05			
Q2007	1.71	8.78	2.47			
Q2008	0	13.04	0.64			
Q2009	8.98	0.890	8.89/8.22			RX/TX
Q2010	13.80	13.42/13.19	12.80/12.62			RX/TX
Q2012	0/12.50	0/12.50	0/0.79			PRE AMP OFF/ON
Q2013	0	0	0/8.90			RX/TX

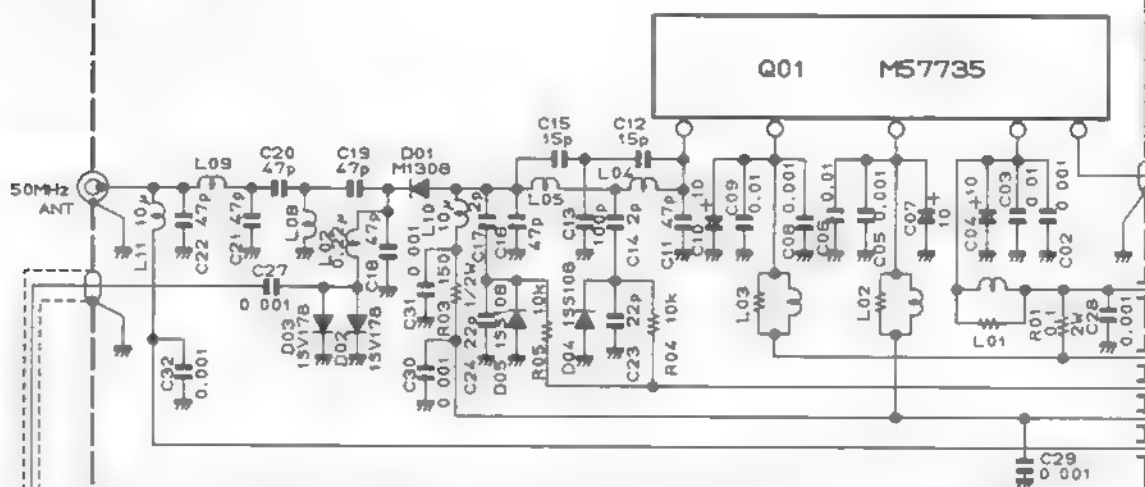
	1 IN	2/OUT
Q2002	0	0
Q2011	8.67	6.14
Q3001		13.8
Q01	13.50	0



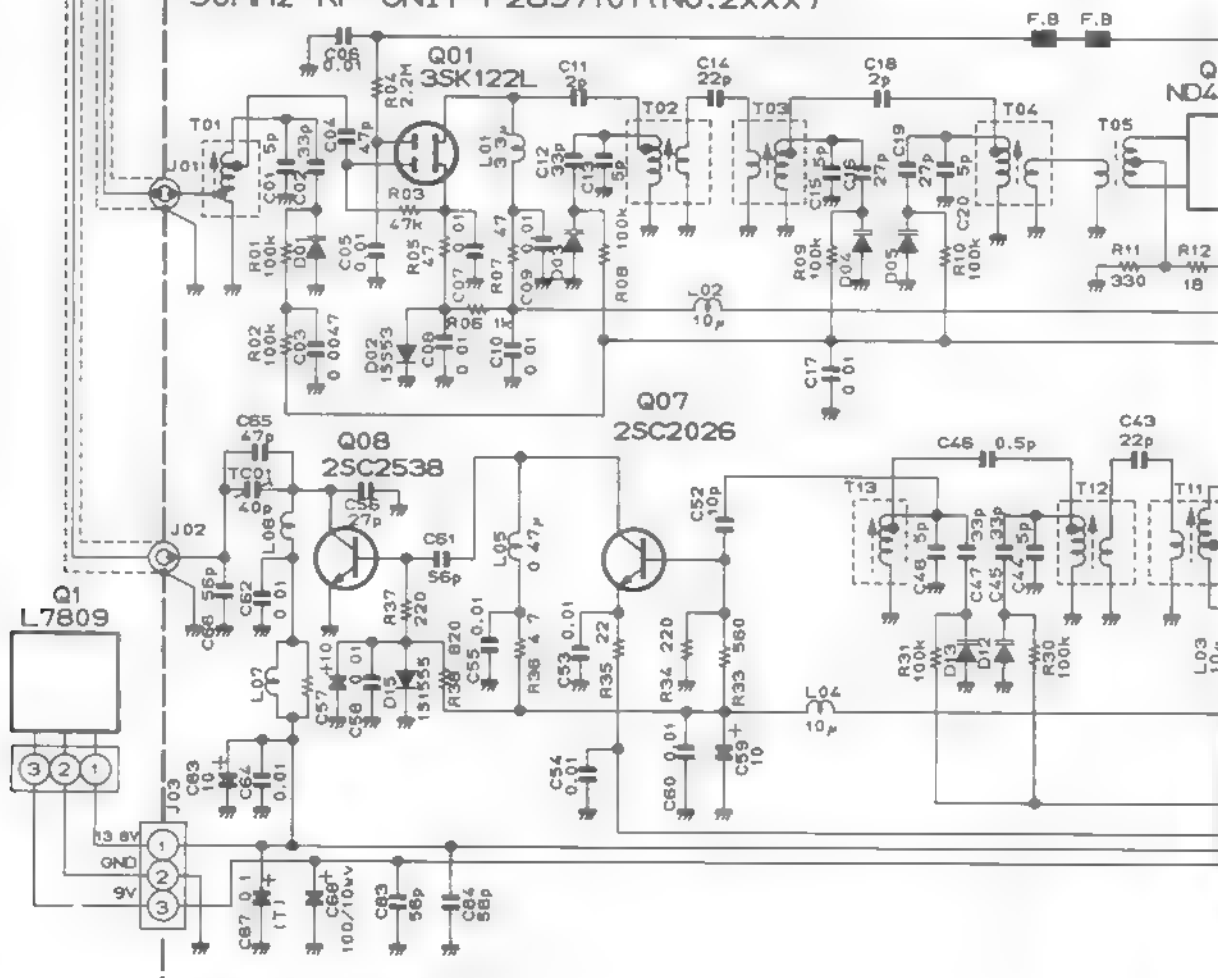
(DC VOLTS)

[illegible]

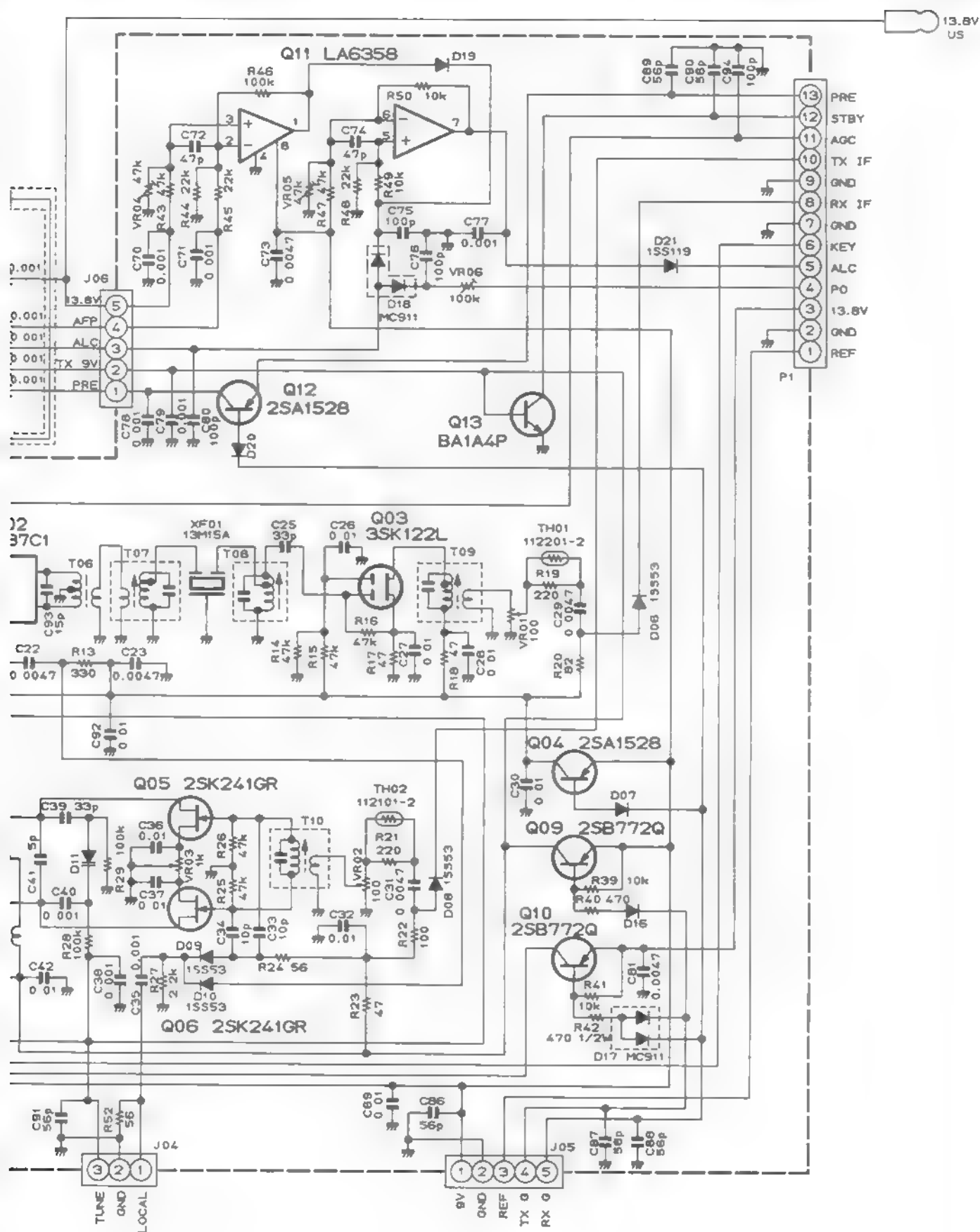
50MHz P.A UNIT F2899000(No.3xxx)



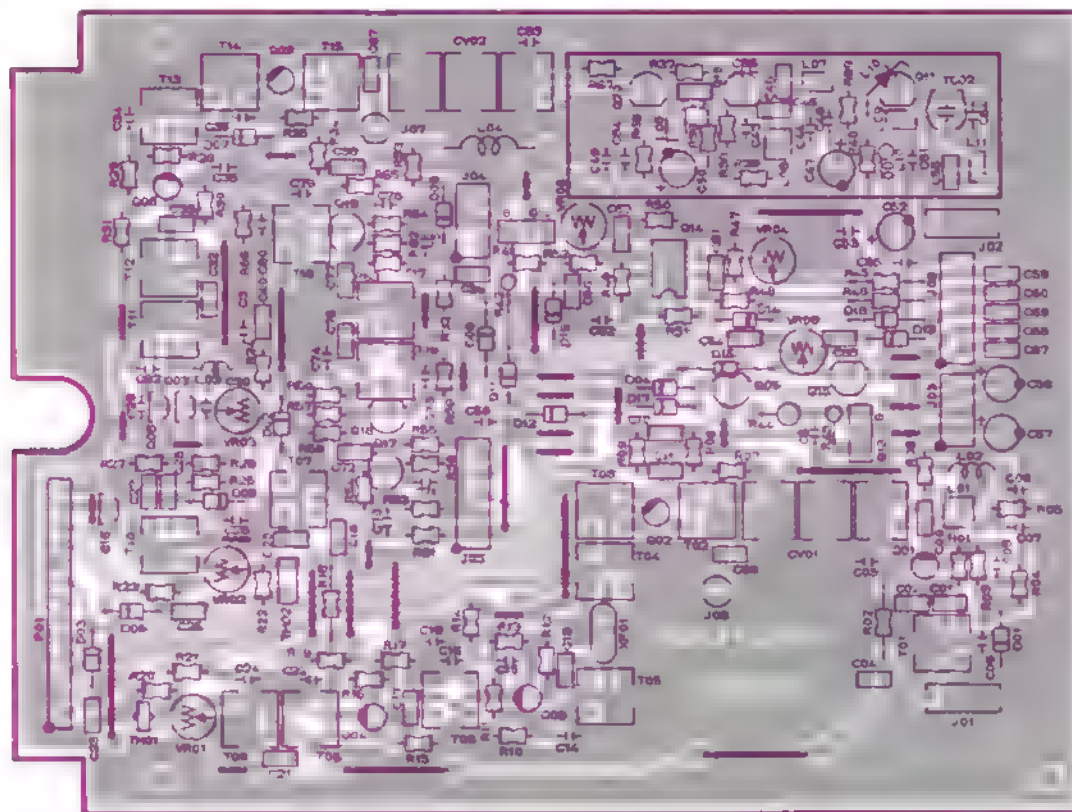
50MHz RF UNIT F2897101(No.2xxx)



RESISTOR VALUES ARE IN Ω , 1/ Ω :
CAPACITOR VALUES ARE IN μ F.
INDUCTOR VALUES ARE HENRIES.
DIODES ARE TYPE 155270 UNLESS OTHERWISE NOTED.
(1) CAPACITORS ARE TANTALUM.



220MHz RF UNIT (No. 2XXX)



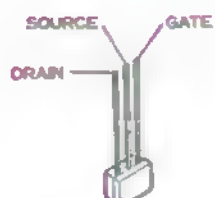
Component side (obverse)



LA6358 (Q2014)



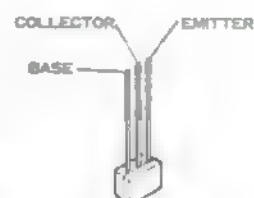
2SK125 (Q2020)



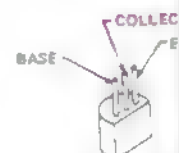
2SK241GR
(Q2006, 2007)



3SK122L
(Q2001, 2003, 2008)
3SK81 (Q2004)



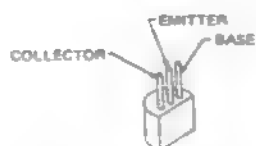
BA1A4P (Q2016)



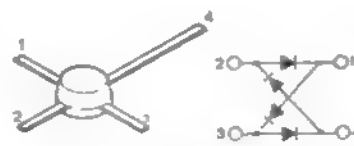
2SA1528 (Q2005),
2SC535B (Q2018)



2SB7720 (Q2012, 2013)



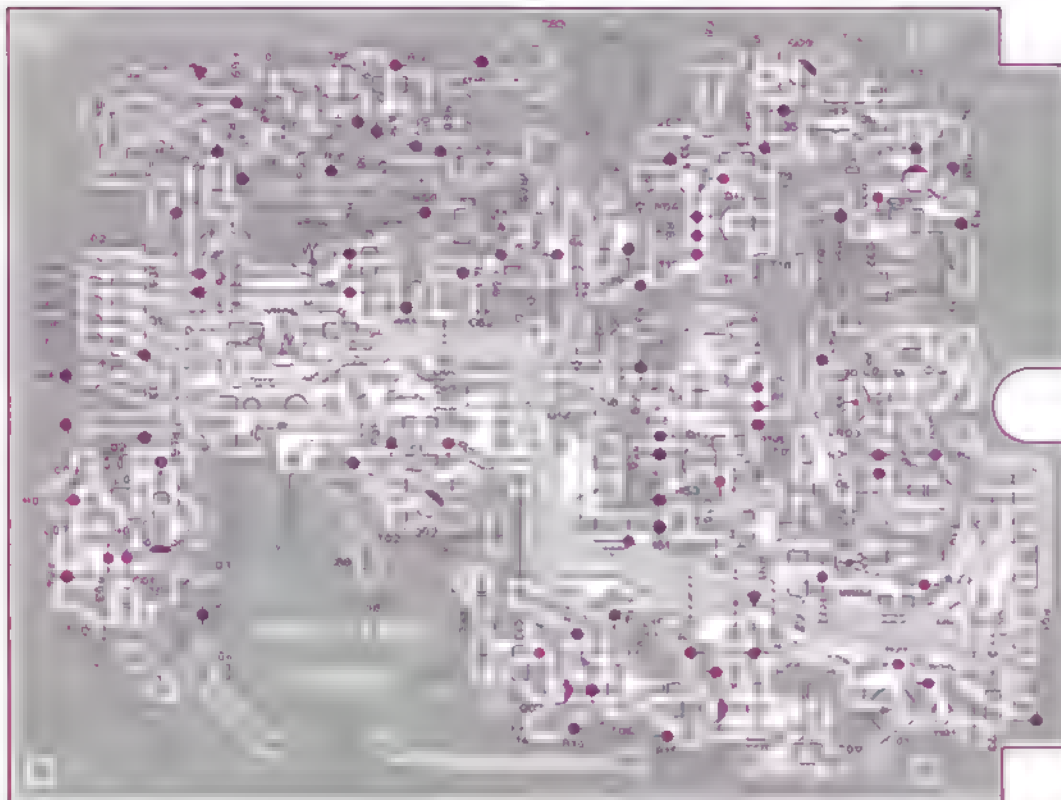
2SC2407(1) (Q2011)
2SC3355 (Q2010)



ND487C1-3R (Q2002)



1.INPUT 2.Vcc₁ 3.Vcc₂
4.Vcc₃ 5.OUTPUT 6.FLANGE
M67712 (Q3001)

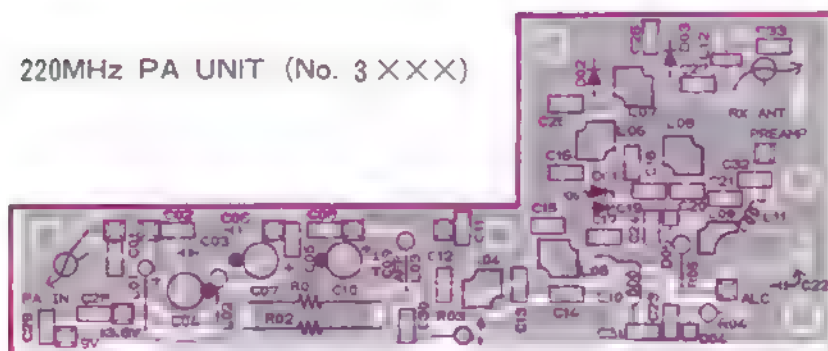


Component side (reverse)

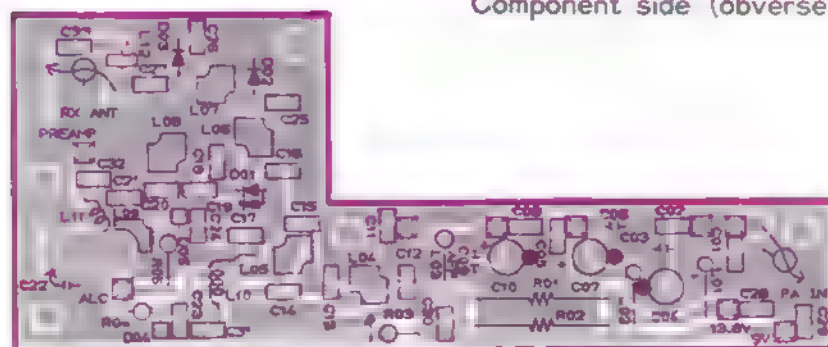
FOR
ATTENTION

220MHz PA UNIT (No. 3XXX)

2015)
2019)

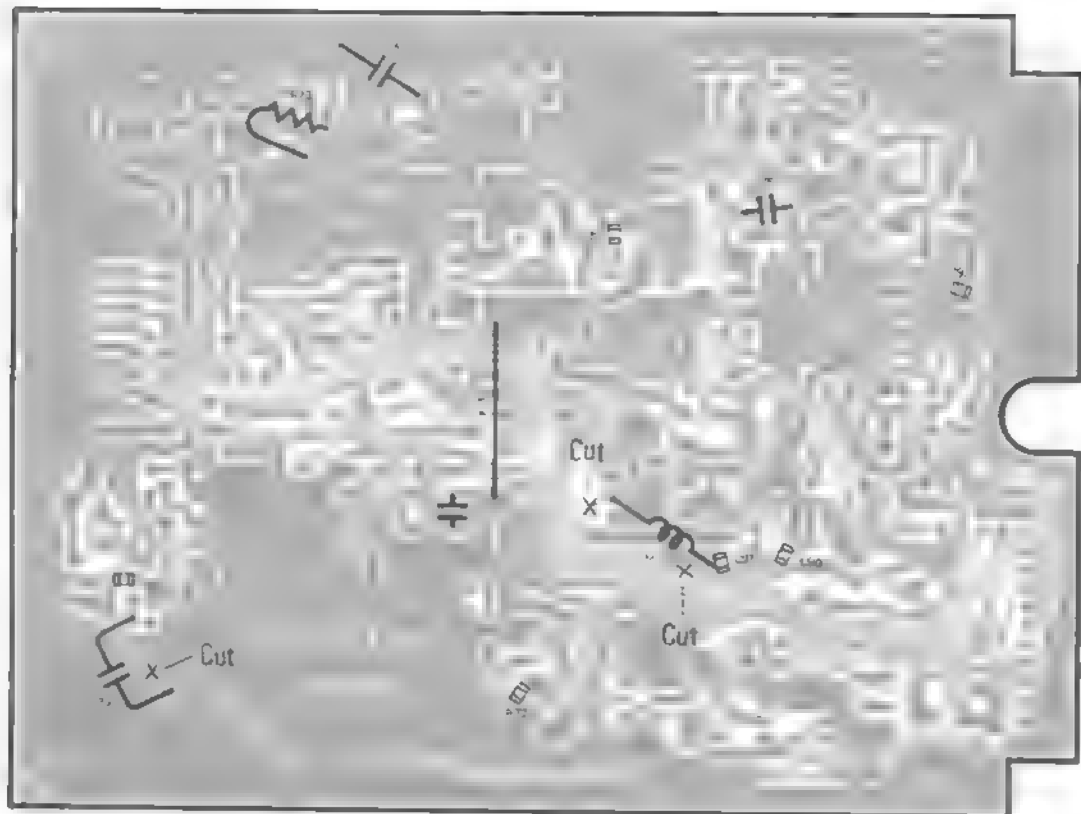


Component side (obverse)



Component side (reverse)

220MHz SMD MODULE P5X7 - 220: 21



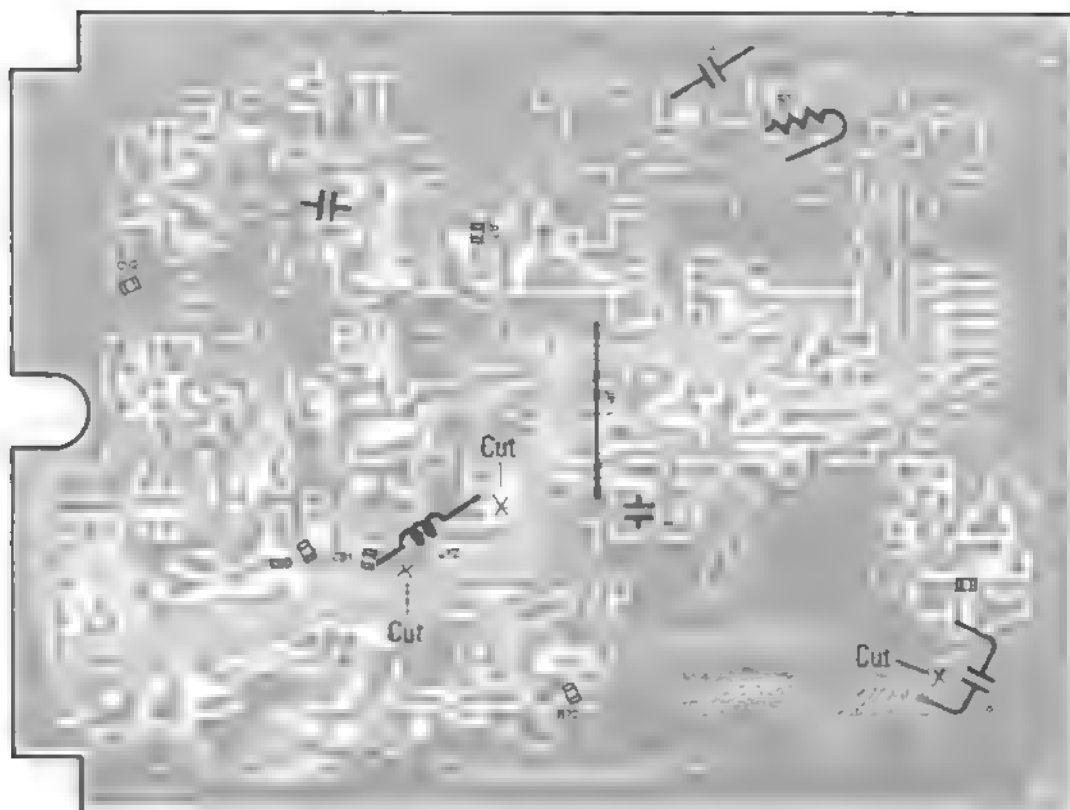
Solder side (obverse)

220MHz RF UNIT VOLTAGE CHART

(DC VOLTS)

	ES	CD	G	B	G ₁	REMARKS
Q2001	1.02	8.64	0.92	1.99		
Q2003	0.50	8.43	0.33	4.47		
Q2004	0.28	8.67	0	0.19		
Q2005	9.00	8.95 0	0.75/2.39			RX/TX
Q2006	1.0	8.9	0			
Q2007	1.0	8.9	0			
Q2008	1.69	8.18	1.82	5.21		
Q2010	0.81	8.55	1.55			
Q2011	0	12.56	0.47			
Q2012	9.00	0.89	8.99/8.20			RX/TX
Q2013	13.80	344.285	272.216			RX/TX
Q2015	0.1250	0.1250	0.079			PRE AMP OFF ON
Q2016	0	0.23.0	0.853			RX/TX
Q2018	0.97	8.76	1.52			
Q2019	1.34	8.73	2.00			
Q2020	1.28	7.65	0			

Q2002
Q2009
Q2014
Q3001
Q01

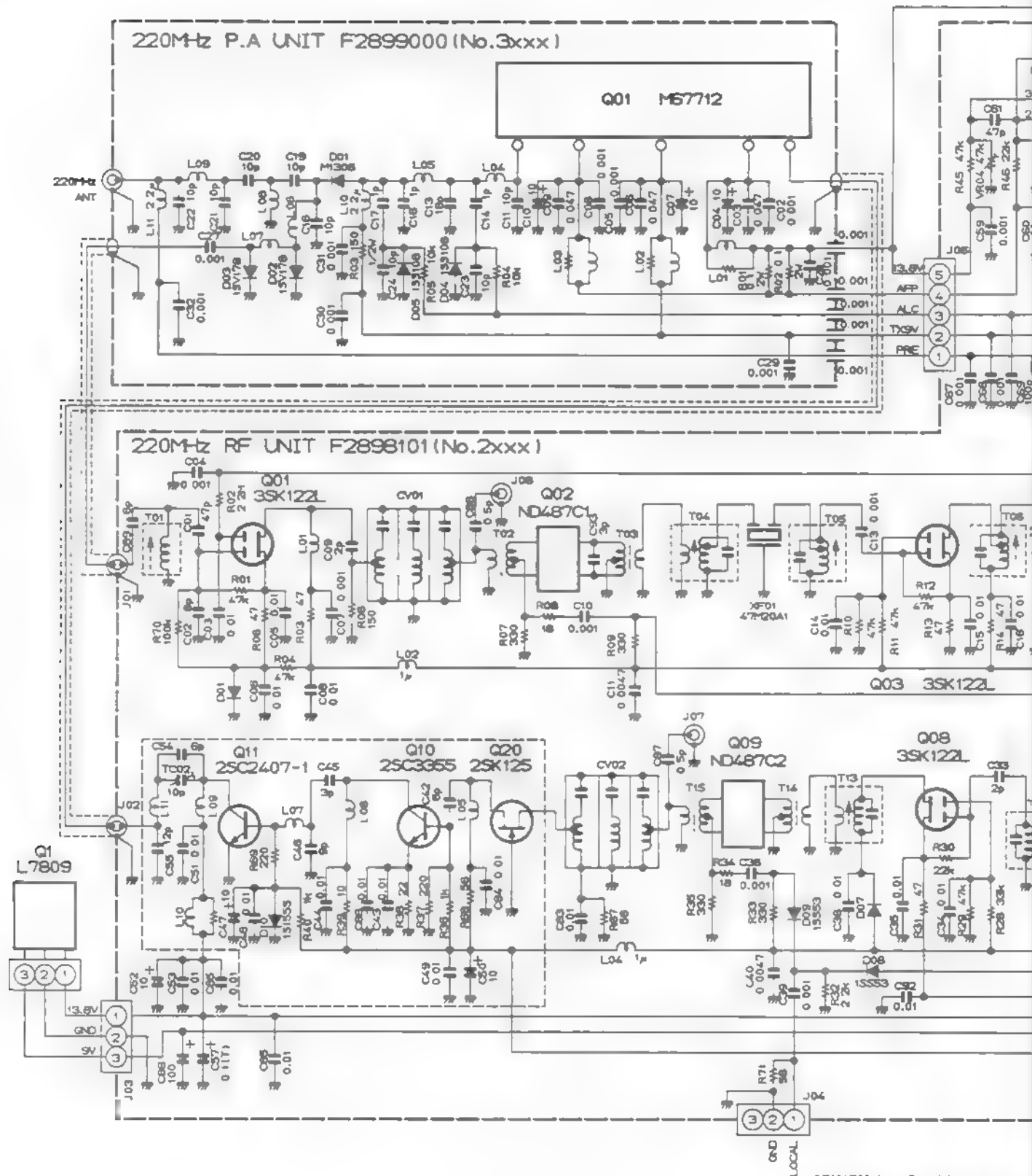


Solder side (reverse)

220MHz RF UNIT IC VOLTAGE CHART

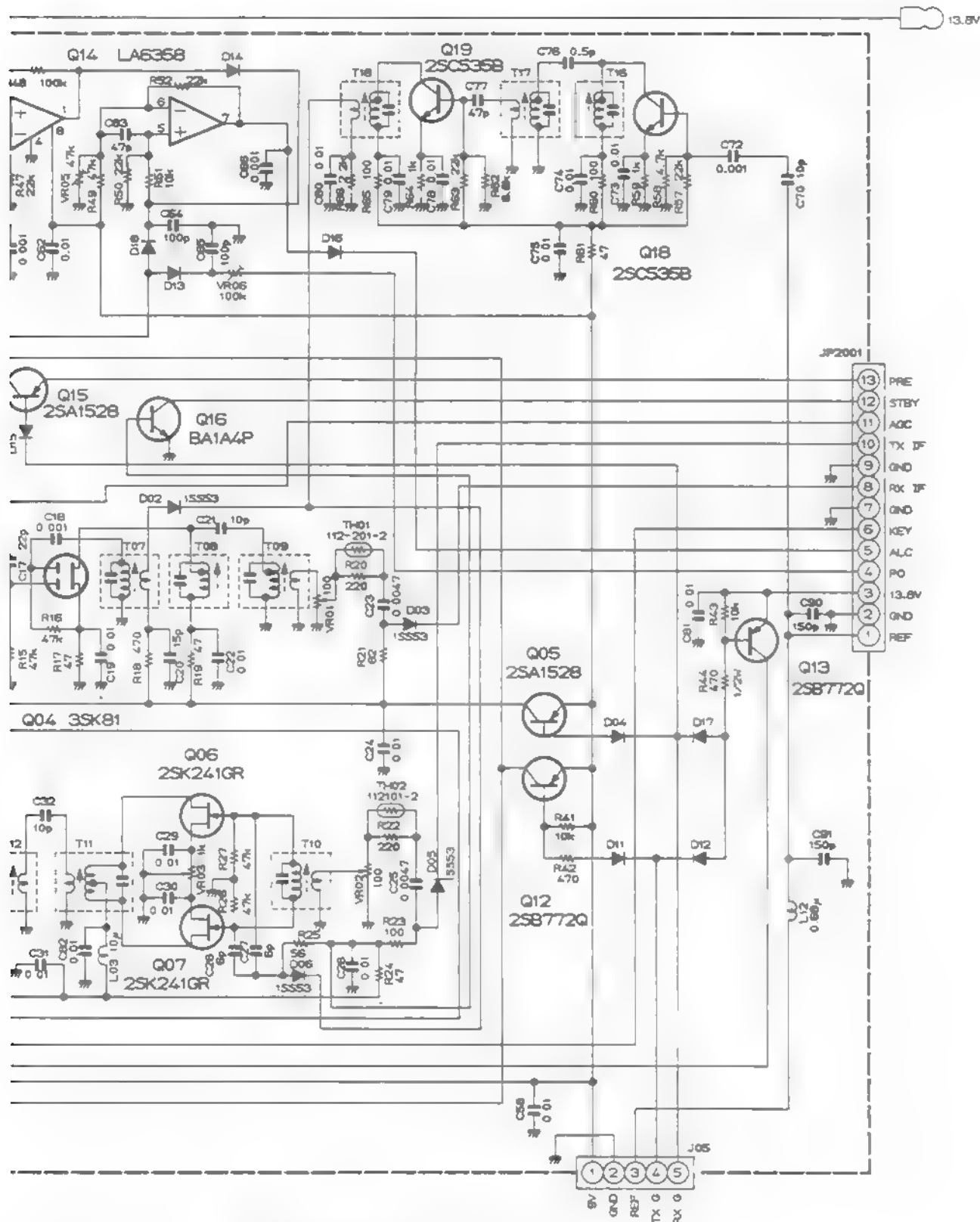
(DC VOLTS)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
0	0																			
0	0																			
1.19	6.02	6.02	0	1.57	1.57	1.06	8.97													@ 10W output
	13.80	9.00	13.16																	@ 10W output
13.8	8.0	0																		



RESISTOR VALUES ARE IN Ω , $\text{k}\Omega$, $\text{M}\Omega$
CAPACITOR VALUES ARE IN μF
INDUCTOR VALUES ARE IN HENRIES.

20MHz BAND MODULE (FEK73F-2201)



DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.

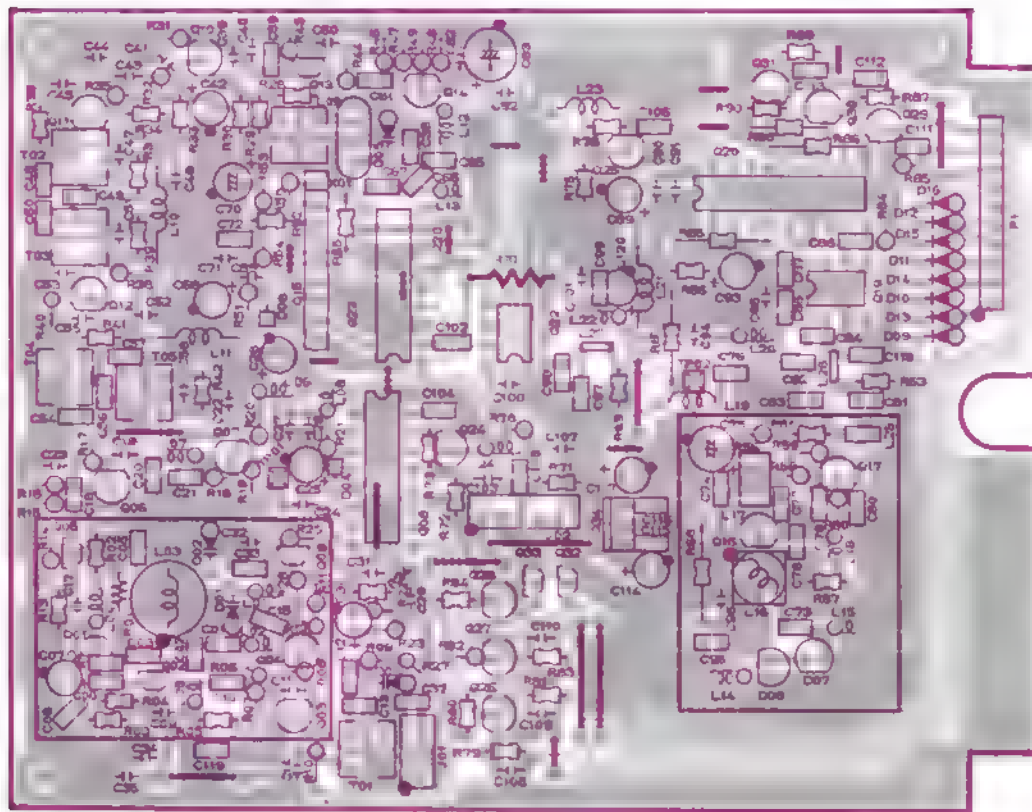
(T) CAPACITORS ARE TANTALUM.

(S) CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25V.

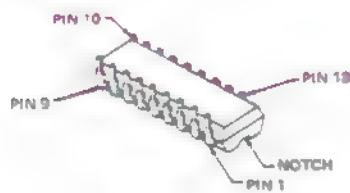
UNLESS OTHERWISE NOTED.

220MHz BAND MODULE (FEK-73F-200)

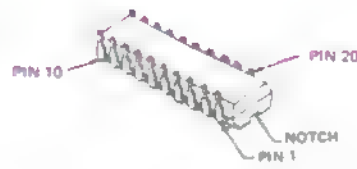
220MHz PLL UNIT (No. XXX)



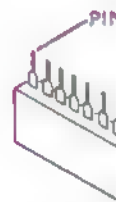
MB504(Q1019)
MB505-16(Q1022)



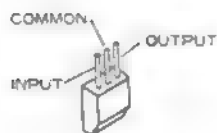
TC9122P(Q1023)
MC145155P(Q1008)



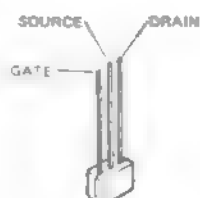
MC145156P(Q1020)



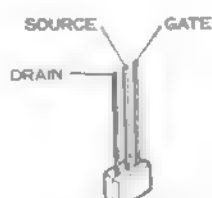
TC5081



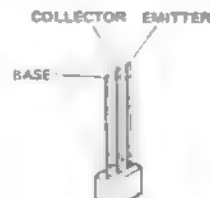
μPC78L05(Q1034)



2SK192AGR(Q1001)
2SK241GR
(Q1002,1005,1013)



2SK507F(Q1016)



BA1A4P
(Q1032,1033)



2SC458C
(Q1004,1024,1025)
1026,1027,1028
1029,1030,1031

2SC460B
(Q1007,1010)

2SC535B
(Q1003,1006,1011)
1012,1014

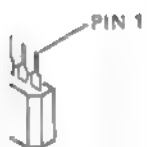
COLLE

2SC

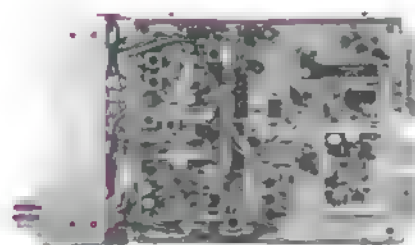


Component side (reverse)

19

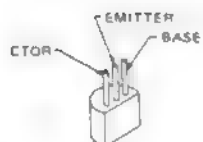


AP(Q1015)

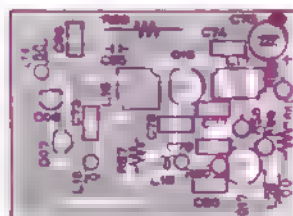


220MHz SUB
VCO UNIT

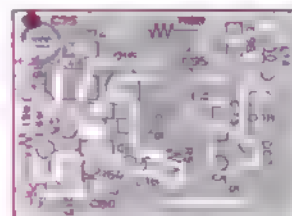
220MHz SUB VCO UNIT (No. 1XXX)



3355(Q1017)



Component side (obverse)



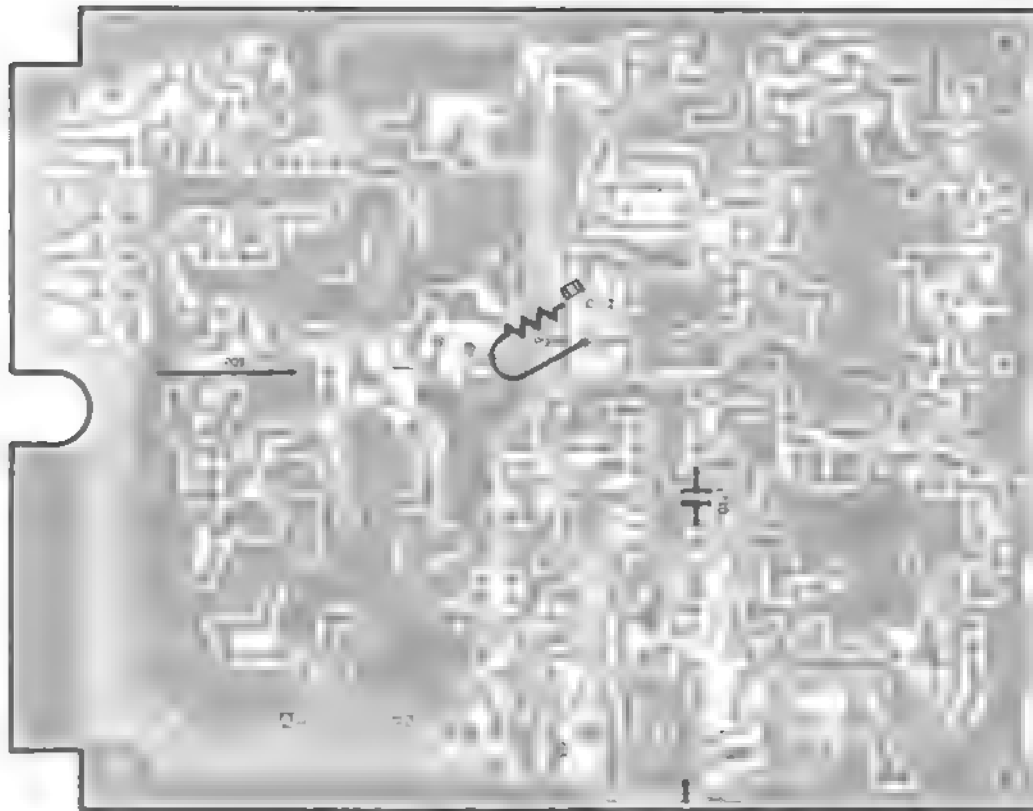
Component side (reverse)



Solder side (obverse)



Solder side (reverse)



Solder side (obverse)

220MHz PLL UNIT VOLTAGE CHART

(DC VOLTS)

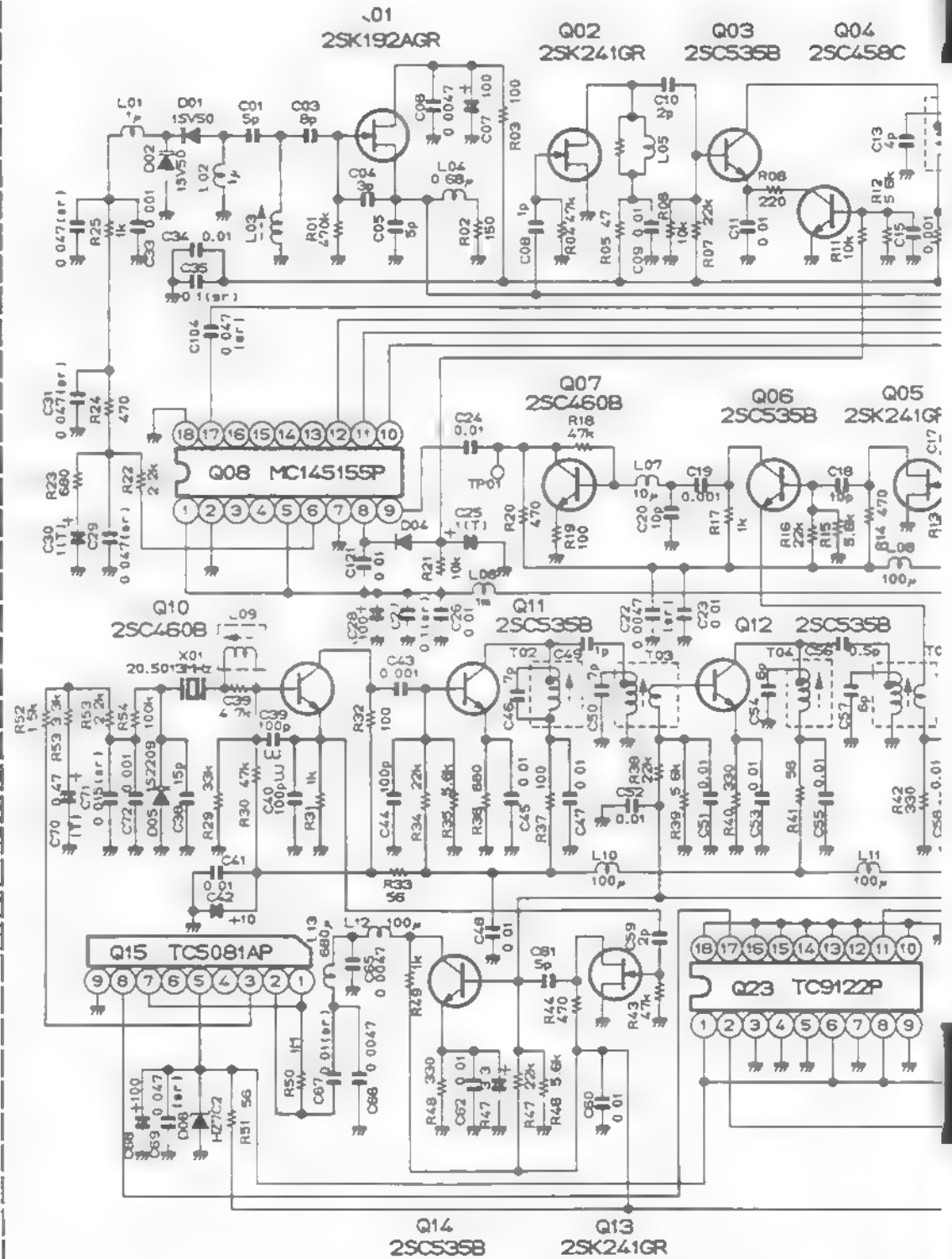
	ES	CD	G _B	REMARKS		ES	CD	G _B	REMARKS
Q1001	0.64	8.32	0		Q1016	1.17	8.67	0	
Q1002	0	8.53	0		Q1017	1.08	7.81	1.86	
Q1003	1.38	8.64	1.77		Q1024	0	5.08	0.70	
Q1004	0	0.06	0.71		Q1025	0	4.55	0.67	
Q1005	0	4.63	0		Q1026	0	0.09	0.69	
Q1006	0.97	6.00	1.58		Q1027	0	0.09	0.69	
Q1007	0.73	5.33	1.46		Q1028	0	0.09	0.09	
Q1010	2.44	8.51	3.04		Q1029	0	0.07	0.68	
Q1011	1.15	8.70	1.74		Q1030	0	0.07	0.68	
Q1012	0.95	8.77	1.63		Q1031	0	0.07	0.68	
Q1013	0	4.74	0		Q1032	0	0.4.893	4.73 0	RX/TX
Q1014	1.05	5.21	1.62		Q1033	0	8.93/0.27	0.4.73	RX/TX



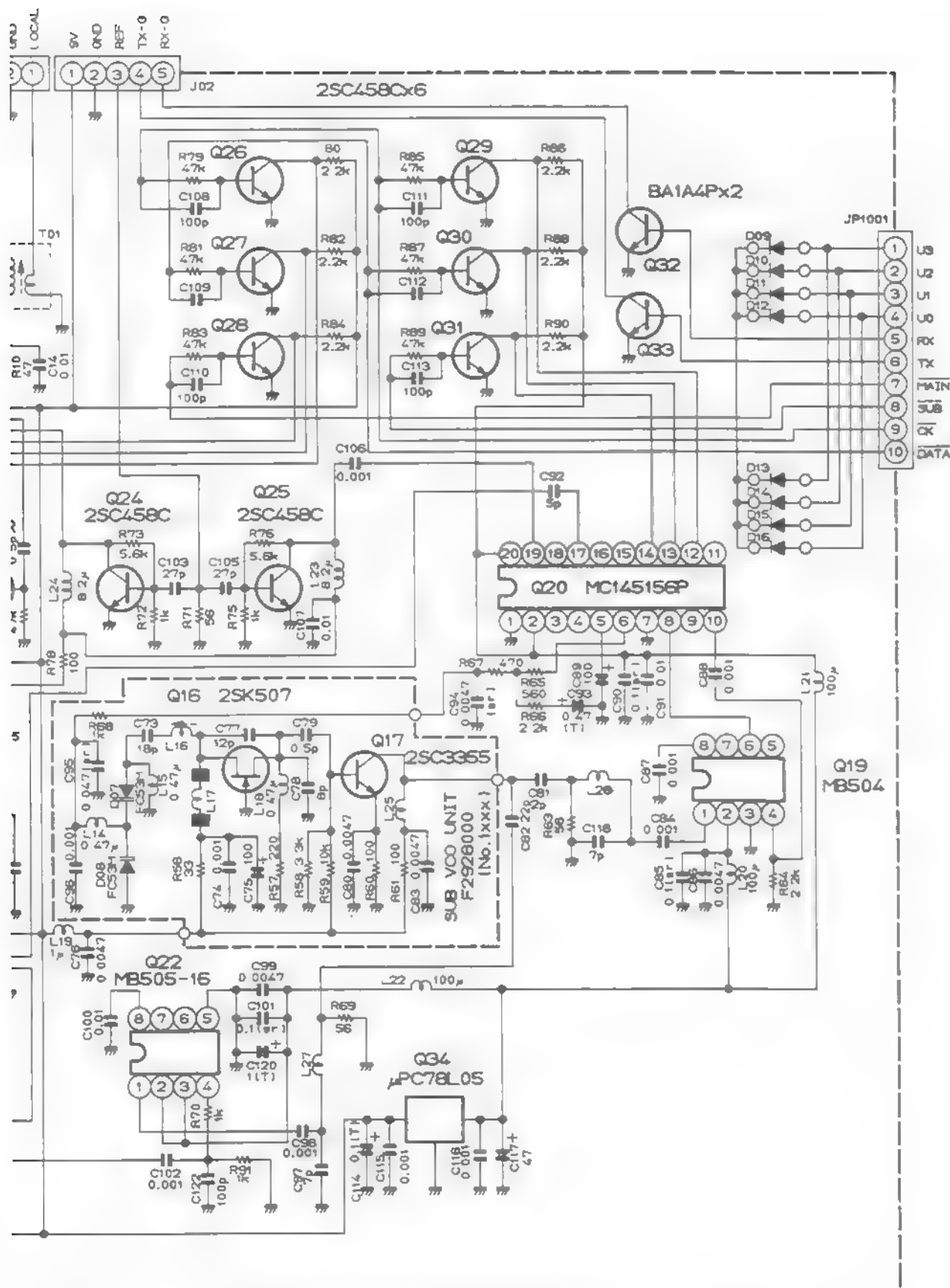
(DC VOLTS)

[illegible]

220MHz PLL UNIT F2898102 (No.1xxx)



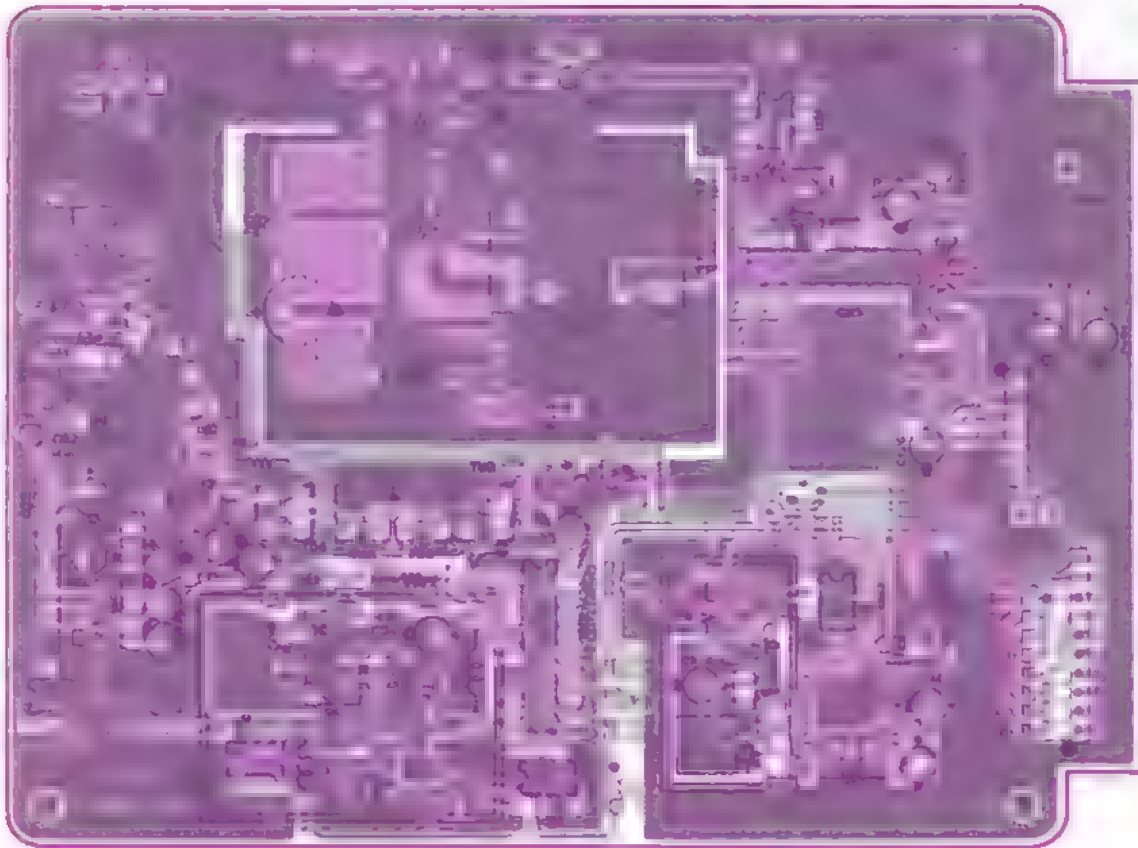
RESISTOR VALUES ARE IN Ω , 1/K Ω ,
CAPACITOR VALUES ARE IN pF,
INDUCTOR VALUES ARE IN HENRIES, UNLESS OTHER



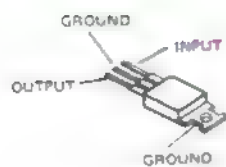
DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.
 (T) CAPACITORS ARE TANTALUM.
 (CER) CAPACITORS ARE SEMICONDUCTOR CERAMIC, 25V:

USE NOTED.

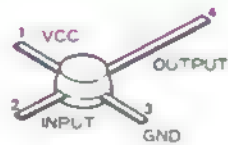
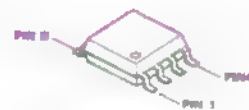
1200MHz PLL UNIT (No.1 XXX)



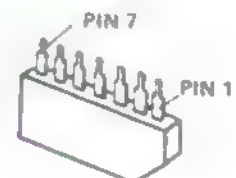
Component side (obverse)



μPC7805H (Q1041)

μPC1651G
(Q1027,1030)

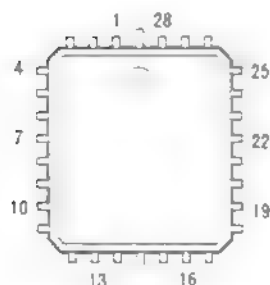
μPC1659G (Q1028)



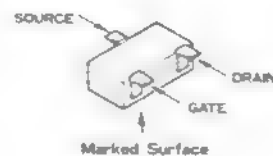
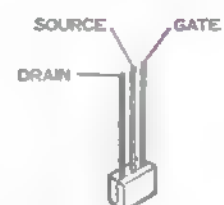
μPC577H (Q1022)



2SK192



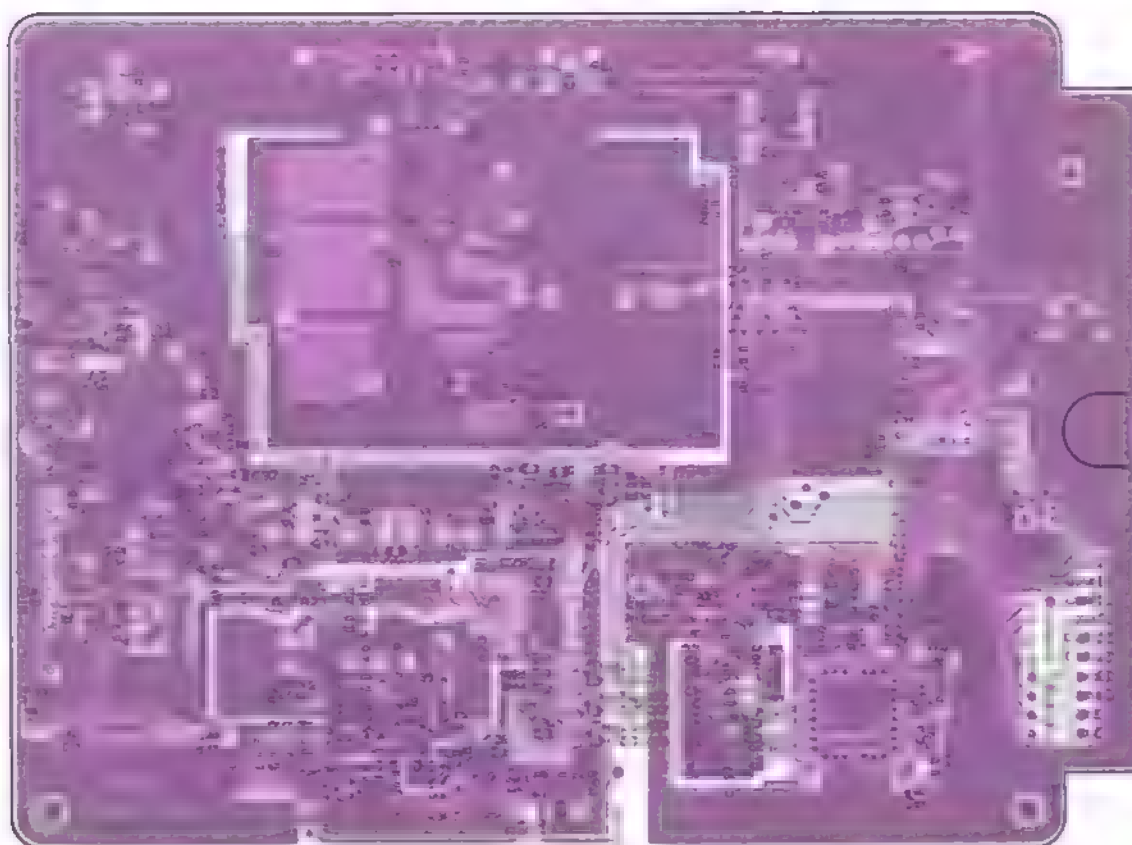
MC145163SL (Q1036)

MB503 (Q1031)
MB504L (Q1011)
μPB551C (Q1037)2SK302Y (TY)
(Q1019,1025)

2SK507F (Q1013)







Chip side (reverse)

1200MHz PLL UNIT IC VOLTAGE CHART

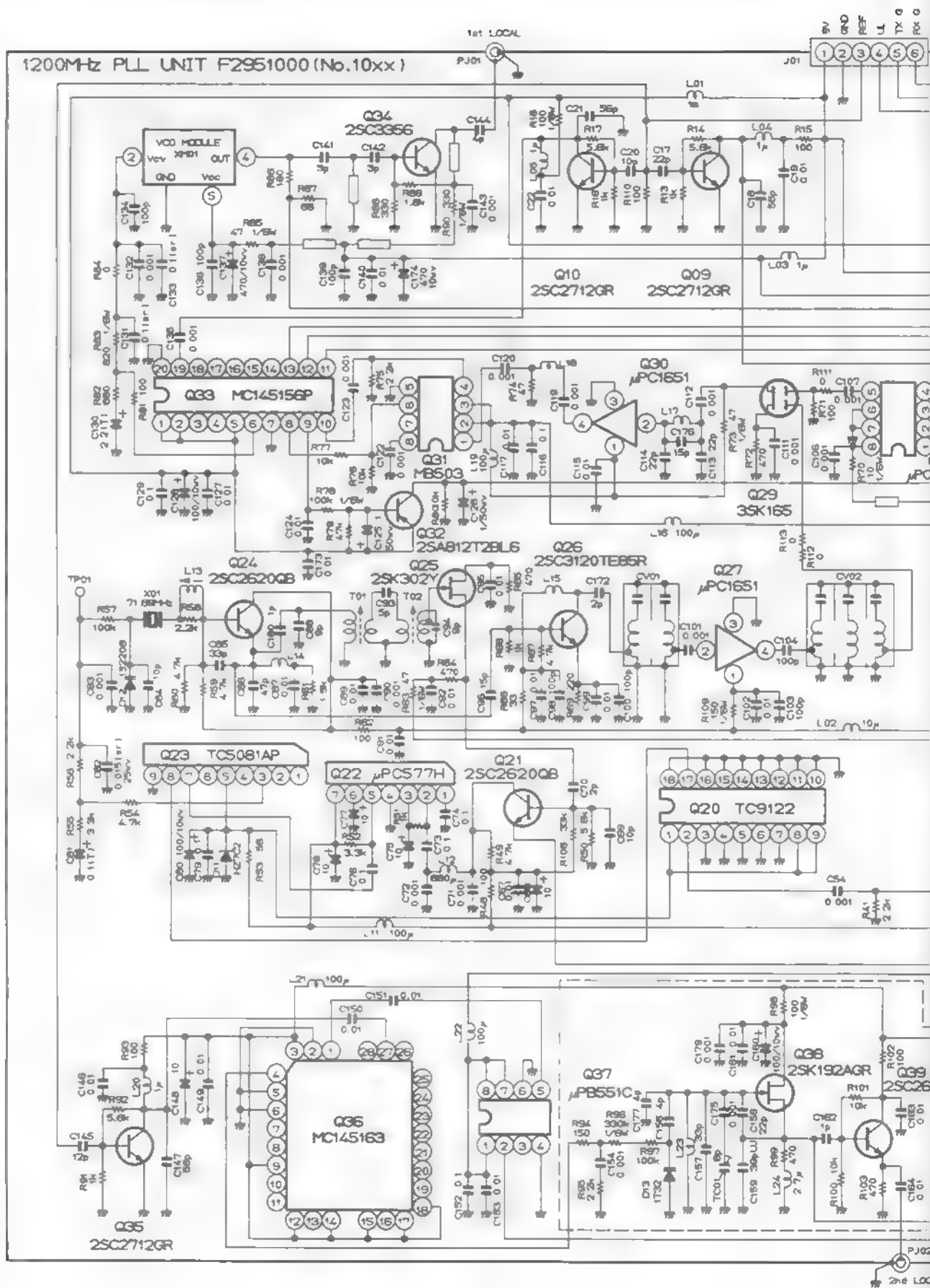
(DC VOLTS)

	1 IN	2 GND	3(OUT)	4	5	6	7	8	9	10	REMARKS
Q1011	237	496	0	274	0	320	—	239			
Q1017	235	235	495	0	252	0	—	—	235		
Q1022	515	179	179	0	430	194	869				
Q1023			200	—	752		370	063	0		
Q1027	089	557	0	318							
Q1028	074	0	0	0	579	0	0	862			
Q1030	088	477	0	307							
Q1031	237	487	487	280	0	349		237			
Q1037	483	321	0	0	235	0	483				
Q1041	887	0	500								

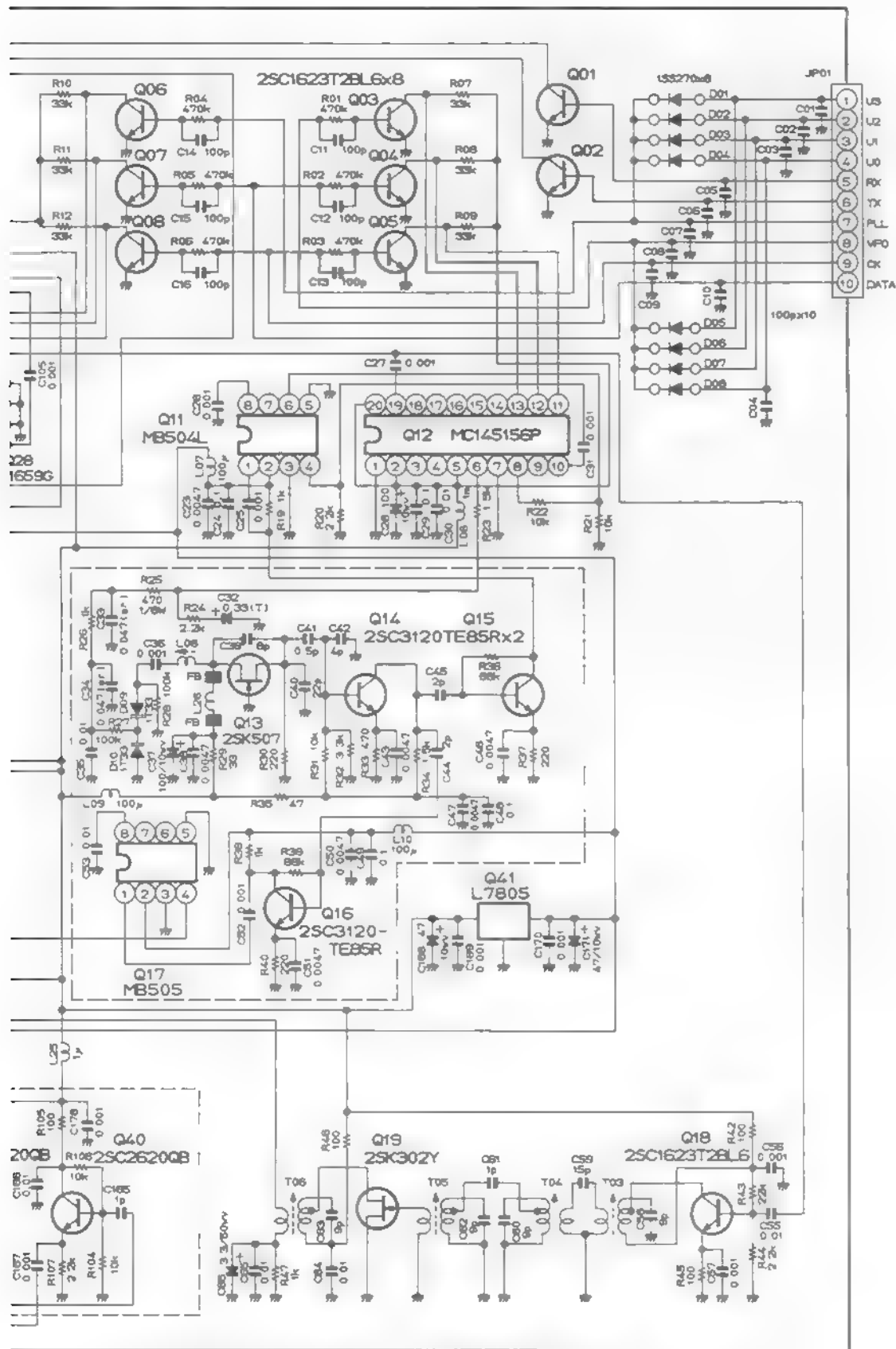
1200MHz PLL UNIT IC VOLTAGE CHART

DC VOLTS)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Q1012	0	854			854	124	0	750	—	391	005	005	005					—	3.76
Q1020	752	0	0	0	0	0	0	752	752	0	0	0	0	0	0	0	063	0	
Q1033	780	780	—	—	780	442	0	761	774	353	005	005	005				—	422	349
Q1036	426	0	863	538	0	0	—	—	863	—	—	863	—	863	8.03	—	863	863	
	20	21	22	23	24	25	26	27	28										
Q1012	885																		
Q1020																			
Q1033	0																		
Q1036	—	—		—				4.19	—										

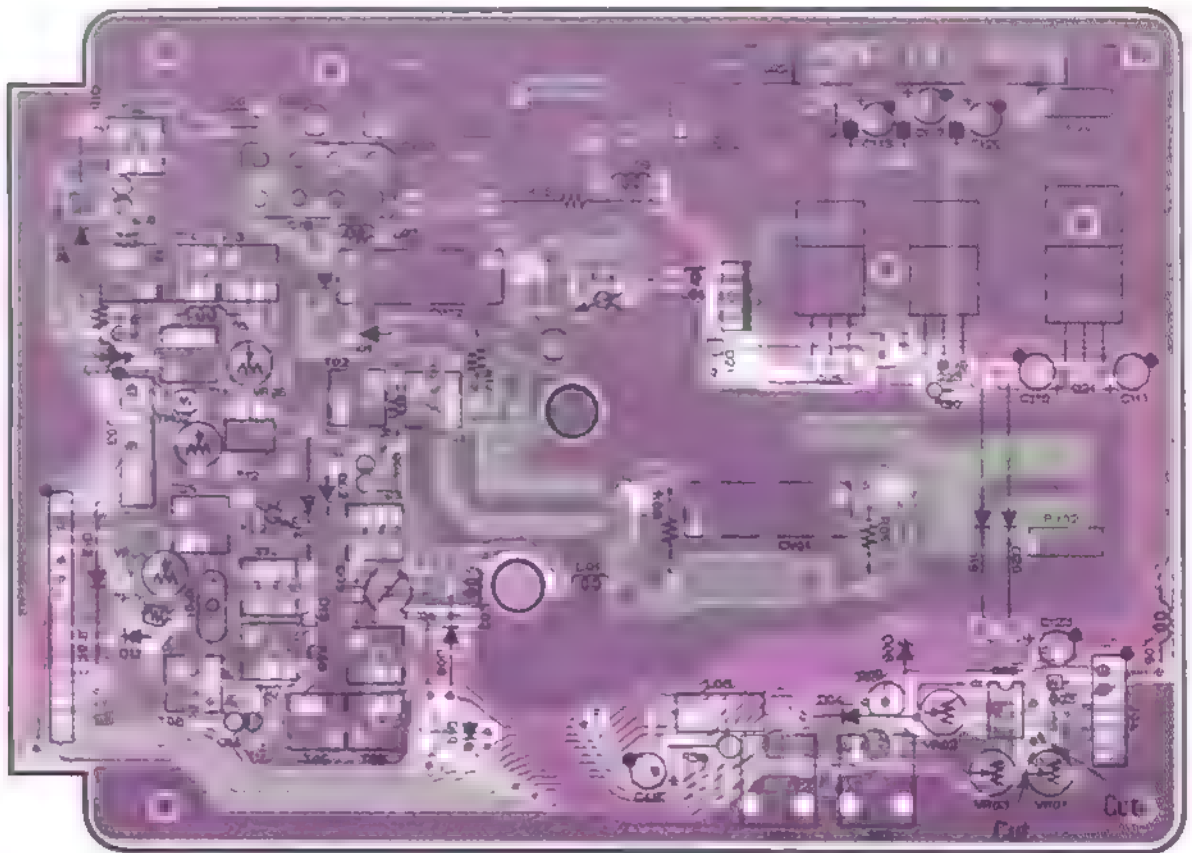


MHz BAND MODULE (FEX-7261)



1200MHz BAND MODULE IFEX 10513

1200MHz RF UNIT (No.2XXX)



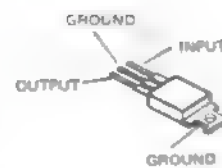
Component side (obverse)



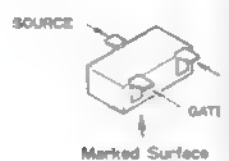
μPC1659G (Q2020)



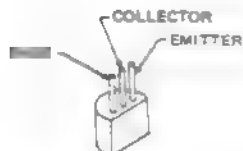
LA6358 (Q2005)



L7809 (Q2021)



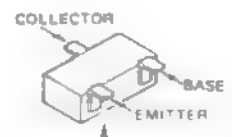
2SK302GR (TQ)
(Q2015,2016,20)



2SA1528 (Q2006)



2SB772P (Q2024)

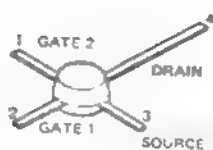


Marked Surface

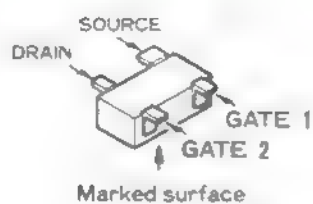
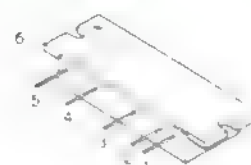
FA1L4L (L30) (Q2027)
FA1L4M (L31) (Q2007,2011)
2SA812 (M6)
(Q2008,2009,2010)
2SC1623 (L6) (Q2026)
2SC2620 (QB) (Q2013)
2SC3356 (R22) (Q2002,2012)



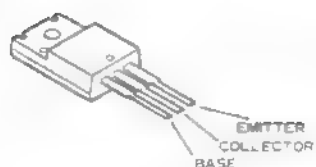
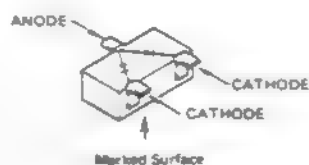
Component side (reverse)

DRAIN
E3SK122L
(Q2004,2014,2018)

17)

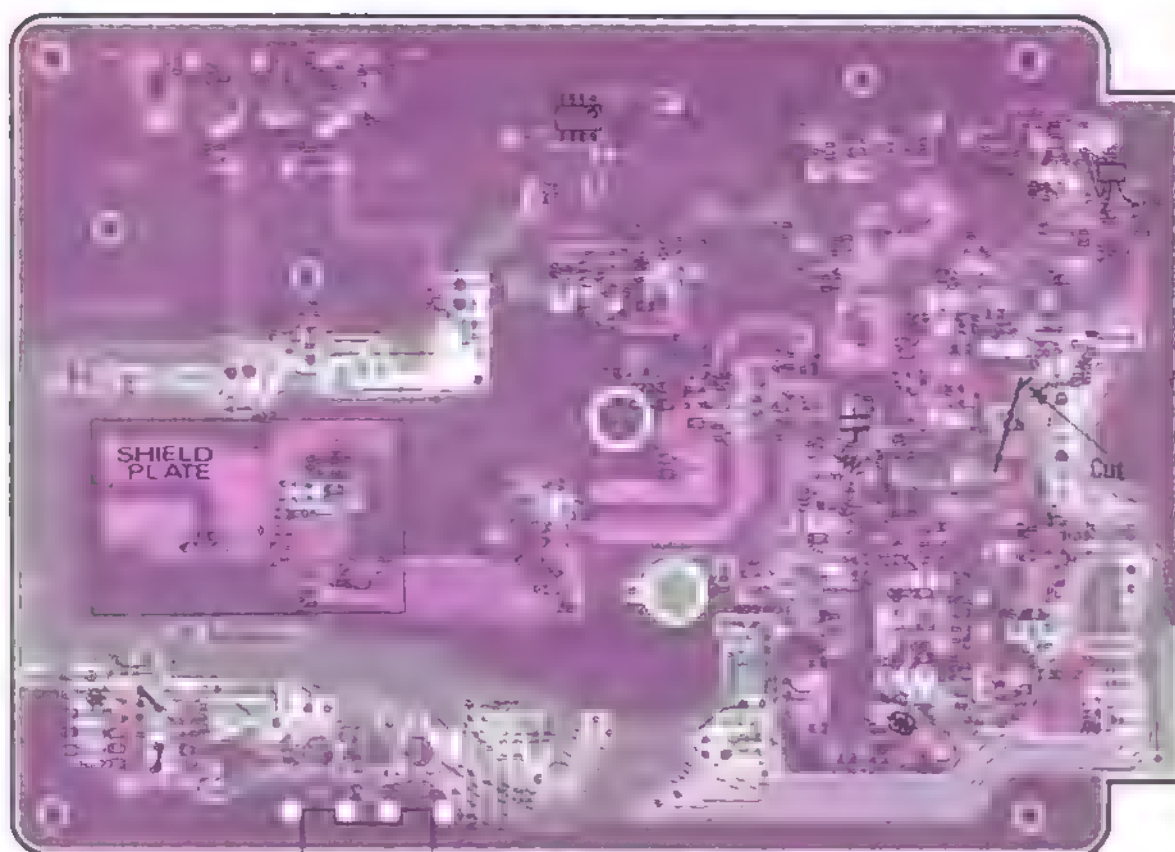
3SK164-0 (F0) (Q2001)
3SK165-0 (J0) (Q2003)1. INPUT
2. Vcc₁
3. Vcc₂
4. Vcc₃
5. OUTPUT
6. FLA

M67715 (Q2022)

2SB1134R (Q2023)
2SD1667R (Q2025)

1SS181 (A3) (D2005)

1.RF (IF) 2,5,6,7.CASE GND
3,4,IF (RF) 8.L0
DM-600A24 (Q2019)



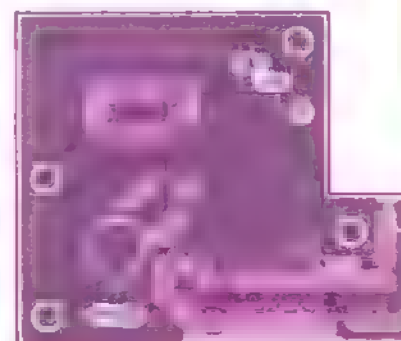
Chip side (obverse)

1200MHz RF UNIT VOLTAGE CHART (DC VOLTS)

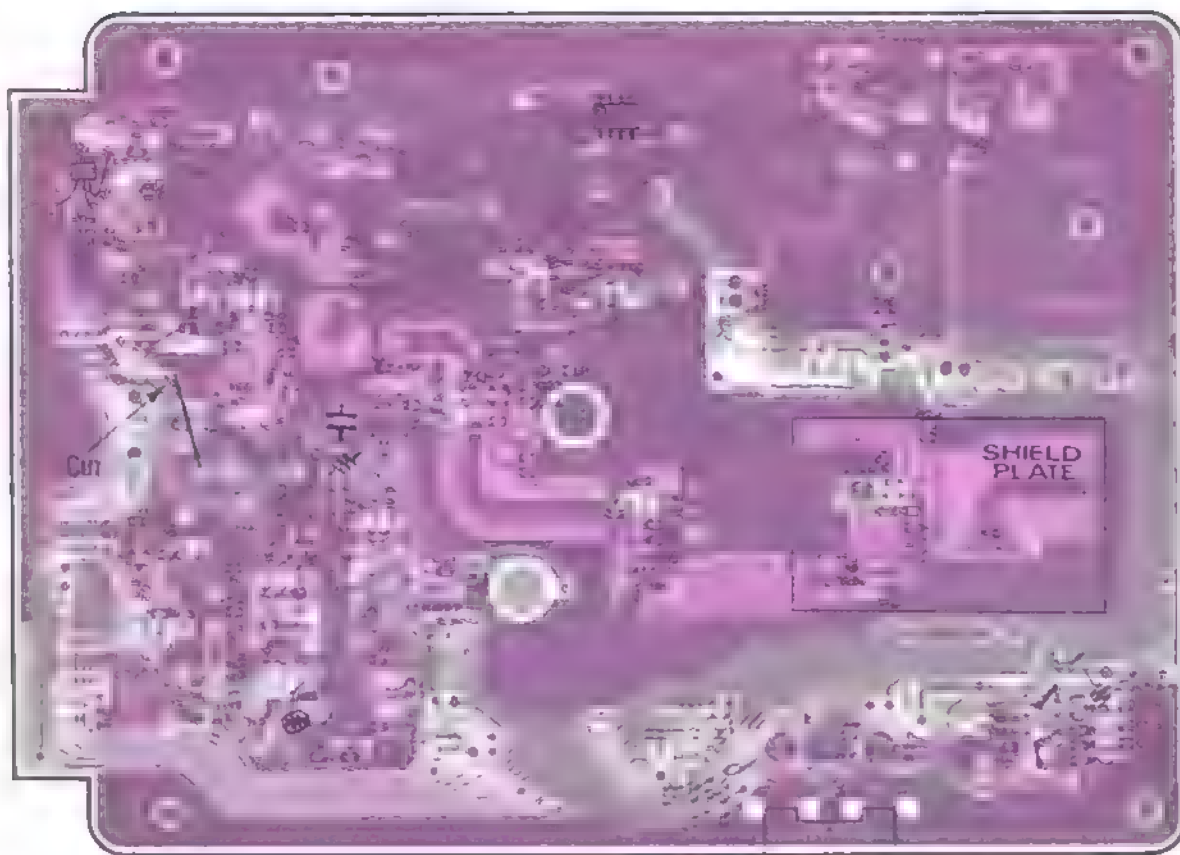
	E(S)	C(D)	G(B)	G ₁	REMARKS		E(S)	C(D)	G(B)	G ₁	REMARKS
Q2001	0.78	8.17	0	1.95		Q2013	.24	7.87	1.91		
Q2002	0.10	7.78	0.84			Q2014	0.13	8.53	0	0	
Q2003	.6	7.2	0	0		Q2015	4.16	8.72	4.36		
Q2004	1.40	7.80	1.01	2.00		Q2016	1.0	8.4	0		
Q2006	0.250	0.250	0.079		PRE AMP OFF ON	Q2017	1.0	8.4	0		
Q2007	138/1326	0.120	138/1304		W/TX UNIT W/TX UNIT	Q2018	1.15	7.63	1.30	3.70	
Q2008	130/1230	0.120	130/1214		W/TX UNIT W/TX UNIT	Q2023	1.34	13.3	12.7		
Q2009	0	0	0			Q2024	157/157	0.8	157/157		PX/TX
Q2010	157/1580	157/1576	0		W/TX UNIT W/TX UNIT	Q2025	0.790	0.573	0.548		PX TX
Q2011	0	0	0.841		RX/TX	Q2026	0	0	0		
Q2012	0	7.15	0.73			Q2027	0	0/3.70	257.25		RX/TX

1200MHz RF UNIT IC VOLTAGE CHART DC VOLTS

	1	2	3	4	5	6	7	8	9	10	REMARKS
Q2005	1.07	1.40	0	1.84	6.38	6.38	1.00	8.43			@ 10W output
Q2019	0	0	0		0	0	0	0			
Q2020	0.74	0	0	0	5.84	0	0	8.70			
Q2021	1.26	0	9.0								
Q2022		7.64	7.64	7.64							
Q3001	-	13.8	9.0	13.2	-						@ 10W output

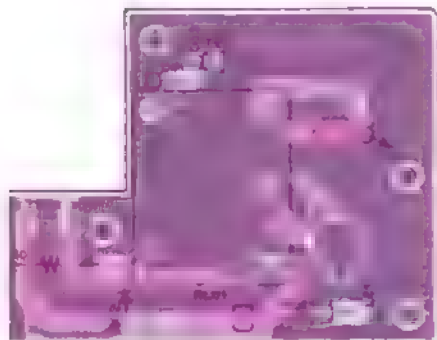


142 BAND MODULE (FEX-733-1.2) 05T01

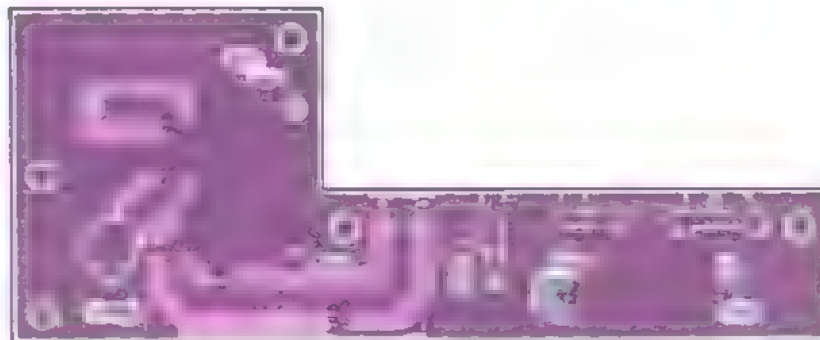


Chip side (reverse)

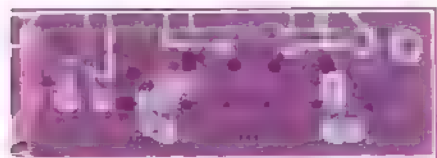
1200MHz PA UNIT (No. 3 × × ×)



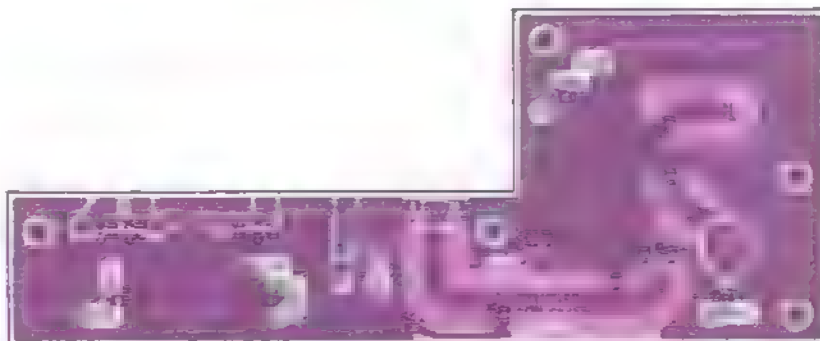
Component side (obverse)



Chip side (obverse)

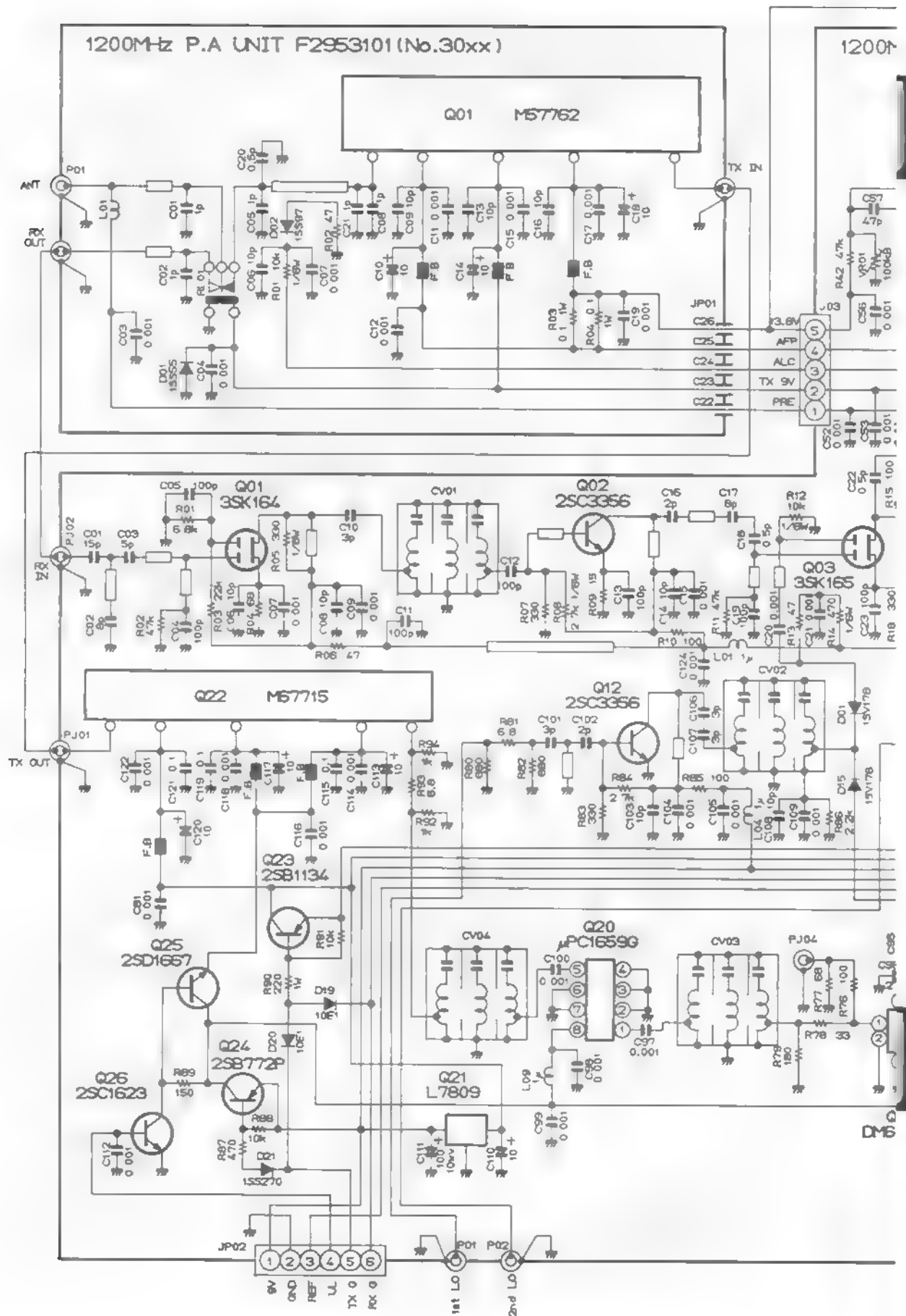


Component side (reverse)



Chip side (reverse)

12001

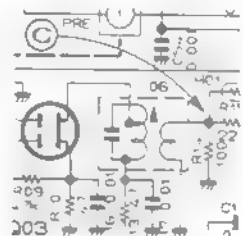
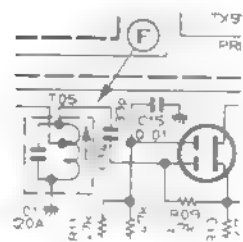
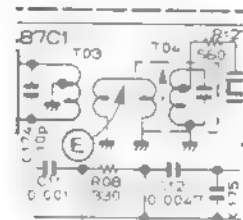
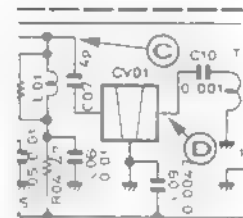
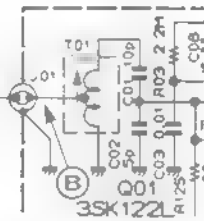
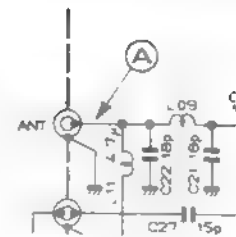
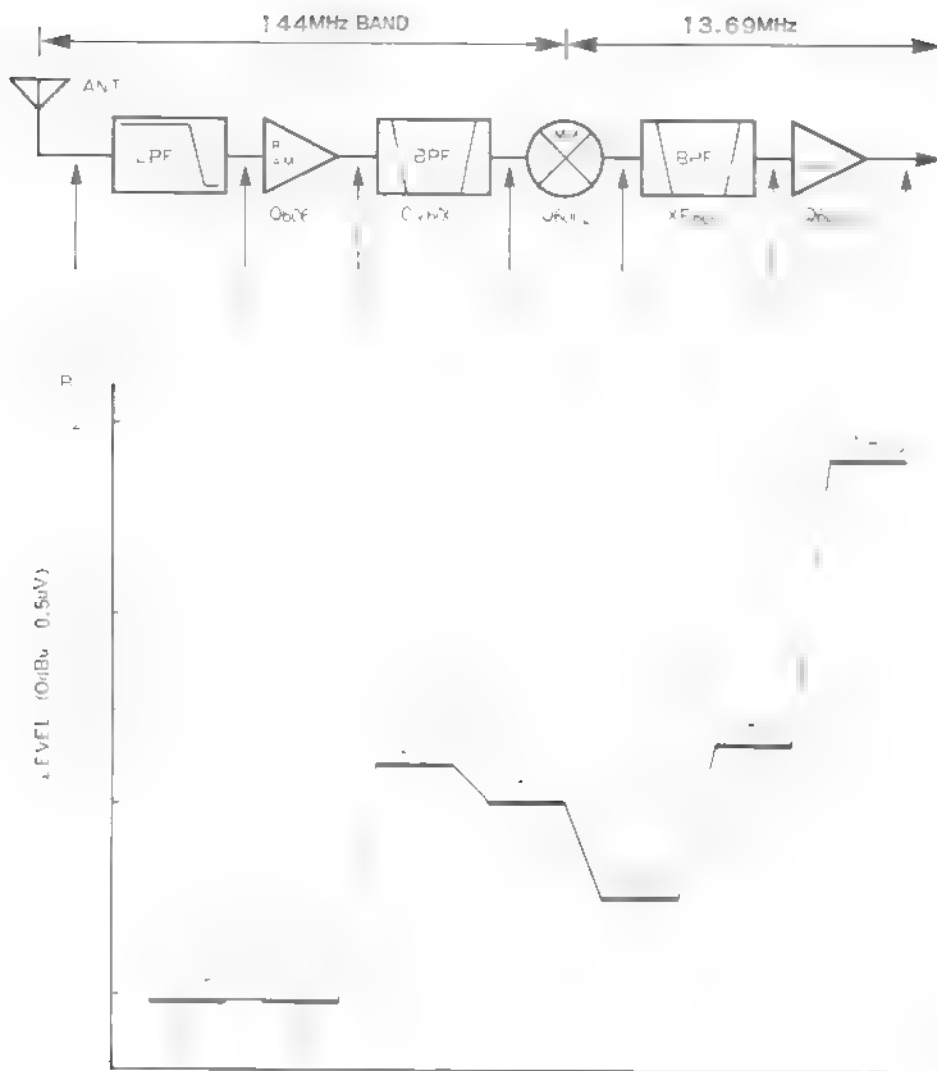


Hz RF UNIT F2952000 (No.20xx)

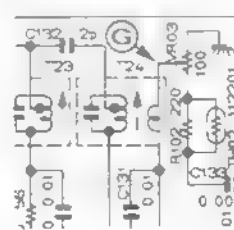
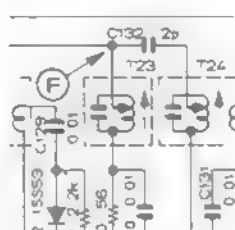
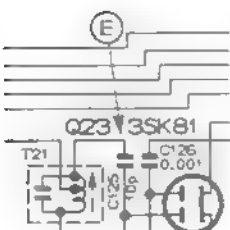
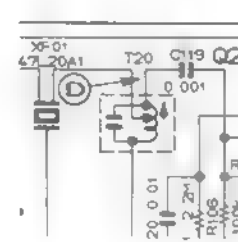
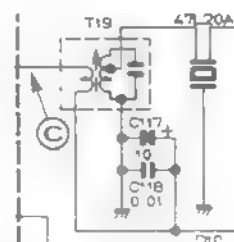
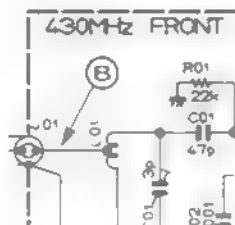
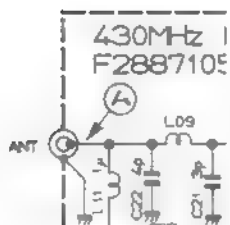
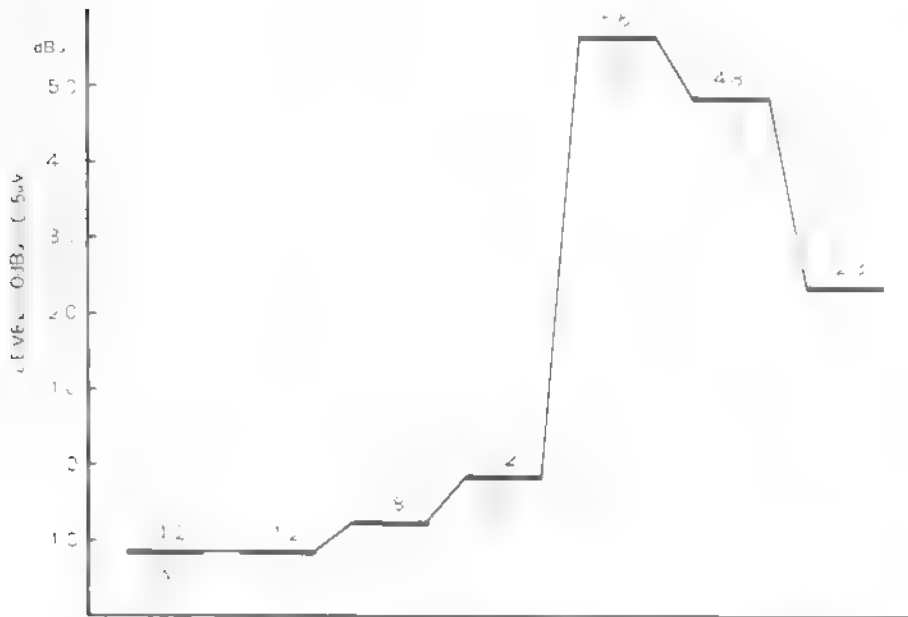
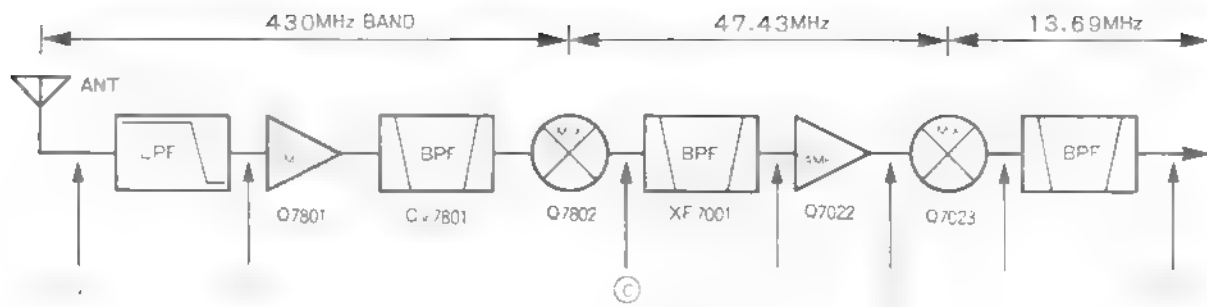
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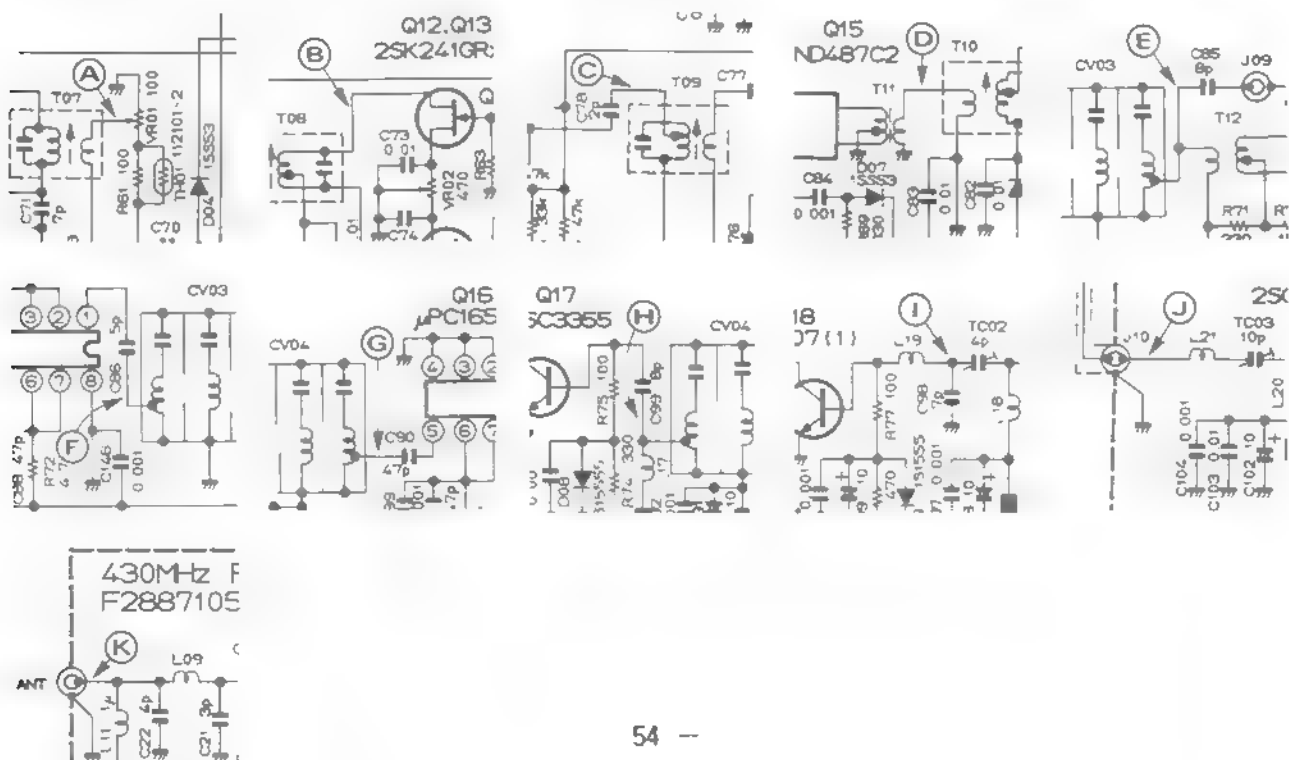
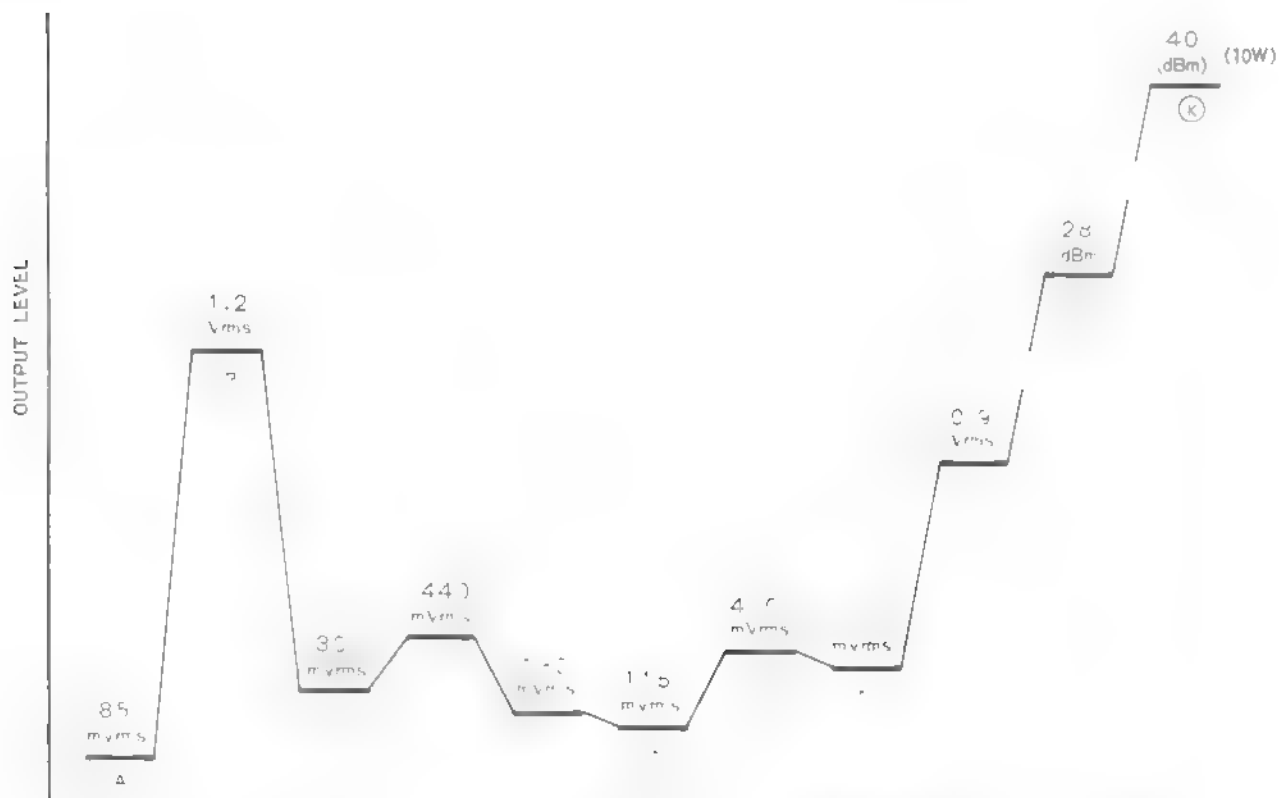
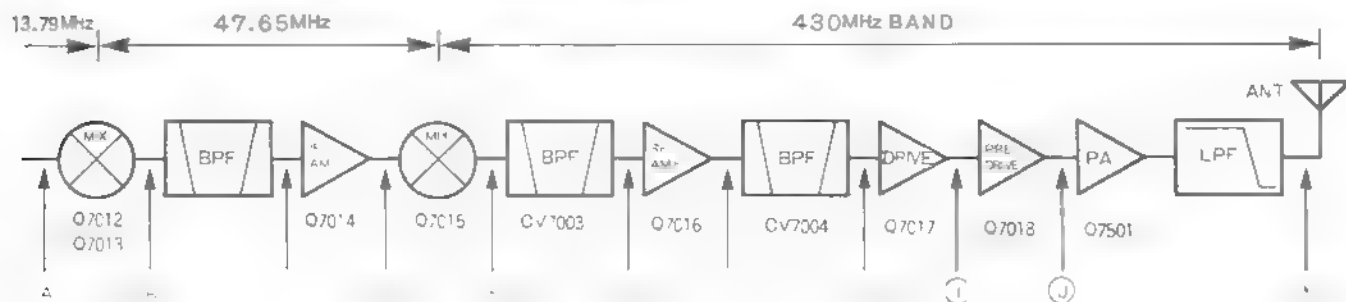
14MHz RX LEVEL DIAGRAM



LEVEL DIAGRAM (10MHz EX)



LEVEL DIAGRAM (NIMHz TX)



The FT-736R is carefully designed to allow the knowledgeable operator to make all adjustments required for various station conditions, modes and operator preferences simply from the controls on the front panel, without opening the case of the transceiver. These adjustments are described in the FT-736R Operating Manual:

The following procedures cover the sometimes critical and tedious adjustments that are not normally required once the transceiver has left the factory. However, if damage occurs and some parts subsequently be replaced, realignment may be required. If a sudden problem occurs during normal operation, it is likely due to component failure; realignment should not be done until after the faulty component has been replaced.

We recommend servicing be performed only by authorized Yaesu service technicians who are experienced with the circuitry and fully equipped for repair and alignment. Therefore, if a fault is suspected, contact the dealer from whom the transceiver was purchased for instructions regarding repair. Authorized Yaesu service technicians realign all circuits and make complete performance checks to ensure compliance with factory specifications after replacing any faulty components.

Those who do undertake any alignment are cautioned to proceed at their own risk. Problems caused by unauthorized attempts at realignment are not covered by the warranty policy. Also, Yaesu must reserve the right to change circuits and alignment procedures in the interest of improved performance, without notifying owners.

Under no circumstances should alignment be attempted unless the normal function and operation of the transceiver are clearly understood, the cause of the malfunction has been clearly pinpointed and any faulty

components replaced, and the need for realignment determined to be absolutely necessary.

The following test equipment (and thorough familiarity with its correct use) is necessary for complete realignment. Correction of problems caused by misalignment resulting from use of improper test equipment is not covered under the warranty policy. While most steps do not require all equipment listed, interactions of some adjustments may require complex adjustments be performed afterwards. Do not attempt to perform only a single step unless it is clearly isolated electrically from all other steps. Rather, have all test equipment ready before beginning, and follow all of the steps in a section in the order they are presented.

A 50-ohm dummy load must be connected to the antenna jack in steps calling for transmission (pressing the MOX button). Correct alignment is not possible with an antenna.

The SHIFT control must be set to the 12 o'clock position, the NOTCH control set fully counterclockwise to OFF, the RF gain control fully clockwise (maximum), and the SQL control must be fully counterclockwise, unless stated otherwise.

After completing one step, read the following step to determine whether the same test equipment will be required. If not, remove the test equipment (except dummy load and wattmeter, if connected) before proceeding.

CAUTION!!!

The front panel PREAMP button must be set to OFF, and jumper plugs J5016-J5019 must be removed from the AF Unit to prevent DC voltage at the Antenna Jacks (which could damage the test equipment).

ALIGNMENT

Alignment Precautions

Correct alignment requires that the ambient temperature be the same as that of the transceiver and test equipment, and that this temperature be held constant between 20 and 30 °C (68 to 86 °F). When the transceiver is brought into the shop from hot or cold air it should be allowed some time for thermal equalization before alignment.

Alignments must only be made with oscillator shields and circuit boards firmly affixed in place. Also, the test equipment must be thoroughly warmed up before beginning.

Alignment values assume an internal DC bus voltage of 13.5V DC.

Note: Signal levels in dB referred to in the alignment procedure are based on 0dBu=0.5uV.

Test Equipment:

Spectrum analyzer covering up to 1300 MHz, or to top edge of highest frequency band installed

Tracking generator covering up to 1300 MHz, or to top edge of highest frequency band installed

RF signal generator covering up to 1300 MHz, or to top edge of highest frequency band installed, with calibrated output and modulation

RF voltmeter ranging from 5mV to 3Vrms, with 5% accuracy to 1300 MHz, or to top edge of highest frequency band installed

Frequency counter with 0.1 ppm accuracy to 1300 MHz, or to top edge of highest frequency band installed

DC voltmeter with at least 10 Megohms impedance

In-line wattmeter accurate to 1300 MHz, or to top edge of highest frequency band installed

50-ohm dummy load, non-reactive to 1300 MHz, or to top edge of highest frequency band installed, 30-watt capacity

FM Deviation meter and SINAD meter

Sampling coupler "T"

AF signal generator with adjustable output from 0.5 to 100mV

AF millivoltmeter

Oscilloscope with 100 MHz bandwidth

I. PLL

A. 144 MHz PLL Sub Loop (on 144 MHz Main Unit - requires DC voltmeter)

1. Connect the DC voltmeter between TP6004 and chassis ground.
2. Tune the transceiver to 14x.01999 MHz, CW mode, and adjust L6019 for 4.2V on the voltmeter.
3. Retune the transceiver to 14x.02000 MHz and confirm at least 0.6V on the voltmeter.
4. Disconnect the voltmeter.

B. 144 MHz PLL VCXO (on 144 MHz Main Unit - requires oscilloscope and DC voltmeter)

1. Connect the oscilloscope to TP6002 and the voltmeter between TP6003 and chassis ground.
2. Tune the transceiver to 14x.01999 MHz, CW mode, and adjust L6023 for 5.0V on the voltmeter.
3. Retune the transceiver to 14x.02000 MHz and confirm at least 1.0V on the voltmeter.
4. Adjust T6013-T6016 for maximum amplitude on the 'scope.
5. Disconnect the 'scope and voltmeter.

C. 144 MHz PLL Main Loop (on 144 MHz Main Unit - requires DC voltmeter)

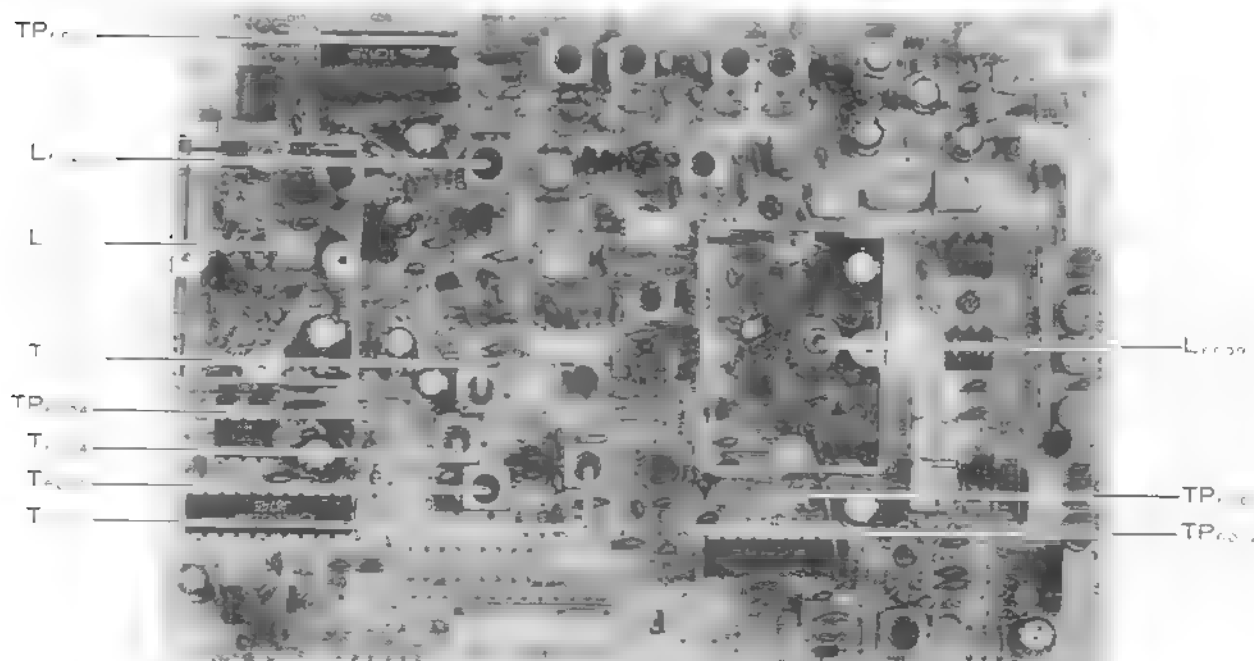
1. Connect the DC voltmeter between TP6001 and chassis ground.
2. Tune the transceiver to the low band edge, CW mode, and adjust L6009 for 2.0V on the voltmeter.
3. Retune the transceiver to the high band edge and confirm $3.0 \pm 0.5V$ (or $2.0 \pm 0.5V$ in versions B1, C1 and H1) on the voltmeter.
4. Disconnect the voltmeter.

D. Transmitter PLL (on TX Unit, requires DC voltmeter)

1. Connect the voltmeter between the exposed lead of R4001 and chassis ground.
2. Adjust T4001 for 4.0V on the voltmeter.
3. Remove the voltmeter.

E. Receiver PLL (on RX Unit, requires DC voltmeter)

1. Connect the voltmeter between the exposed lead of R3005 and chassis ground.
2. Adjust T3001 for 4.0V on the voltmeter.
3. Remove the voltmeter.



144MHz MAIN UNIT ALIGNMENT POINTS

F. 430 MHz PLL Sub Loop (on 430 MHz PLL Unit - requires DC voltmeter)

1. Connect the DC voltmeter between TP8001 and chassis ground.
2. Tune the transceiver to 4xx.01999 MHz, CW mode, and adjust L8004 for 4.2V on the voltmeter.
3. Retune the transceiver to 4xx.02000 MHz and confirm at least 0.6V on the voltmeter.
4. Disconnect the voltmeter.

G. 430 MHz PLL VCXO (on 430 MHz PLL Unit - requires RF voltmeter and DC voltmeter)

1. Connect the RF voltmeter to the exposed lead of R8015, and the DC voltmeter between the exposed lead of R8017 and chassis ground.

2. Tune the transceiver to 4xx.01999 MHz, CW mode.

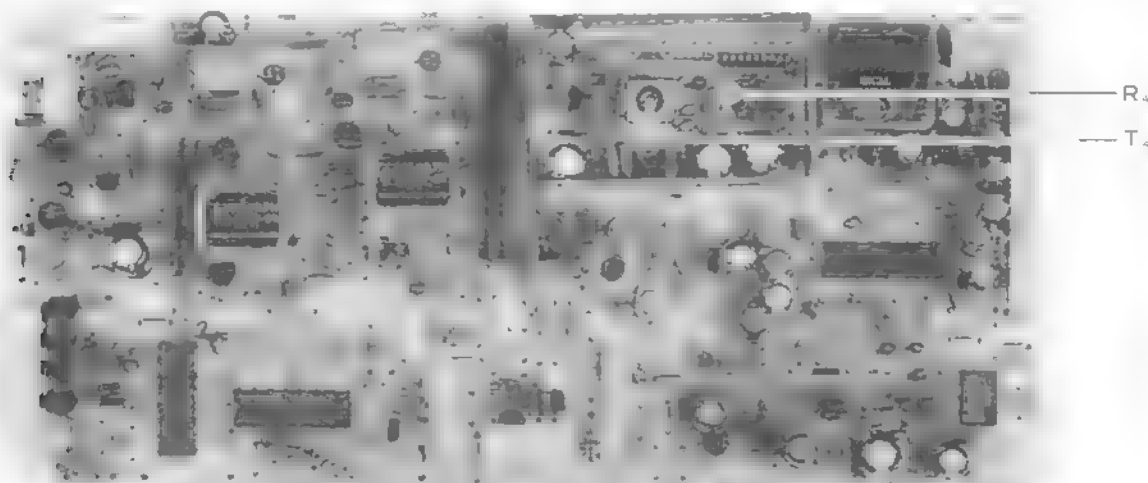
3. Adjust T8001 for maximum RF voltage, and then adjust L8016 for 6.5V on the DC voltmeter.

4. Retune the transceiver to 4xx.02000 MHz and confirm at least 1.0V on the DC voltmeter.

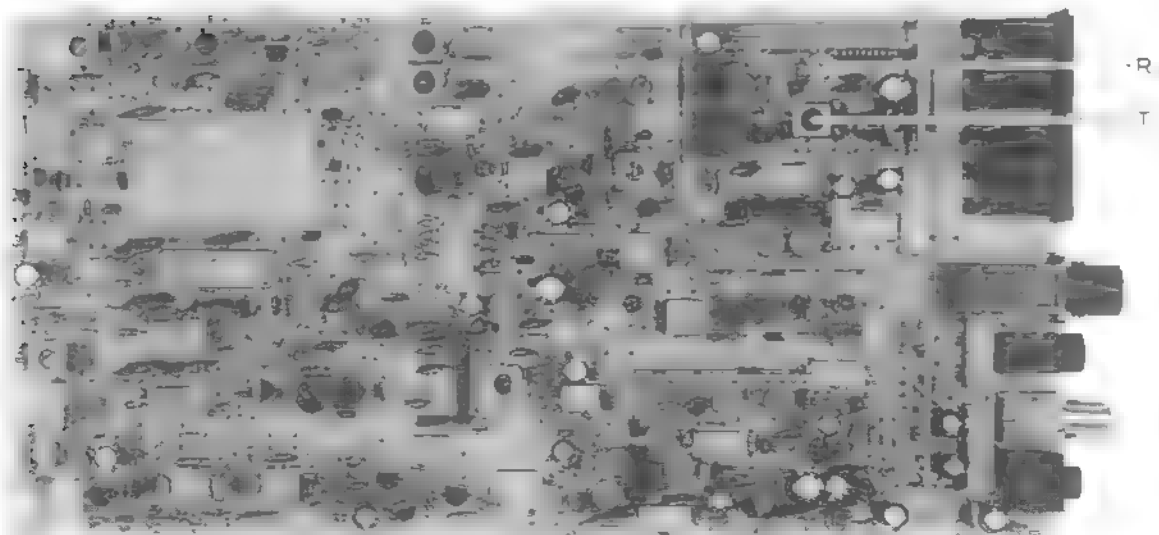
5. Retune the transceiver to the center of the band, FM mode, and move the RF voltmeter to J8001.

6. Adjust T8002 and CV8001 for maximum on the RF voltmeter.

7. Disconnect the voltmeters.



TX UNIT ALIGNMENT POINTS



RX UNIT ALIGNMENT POINTS

(PLL) ALIGNMENT

H. 430 MHz 2nd Local (on 430 MHz Local and RF Units - requires RF and DC voltmeters)

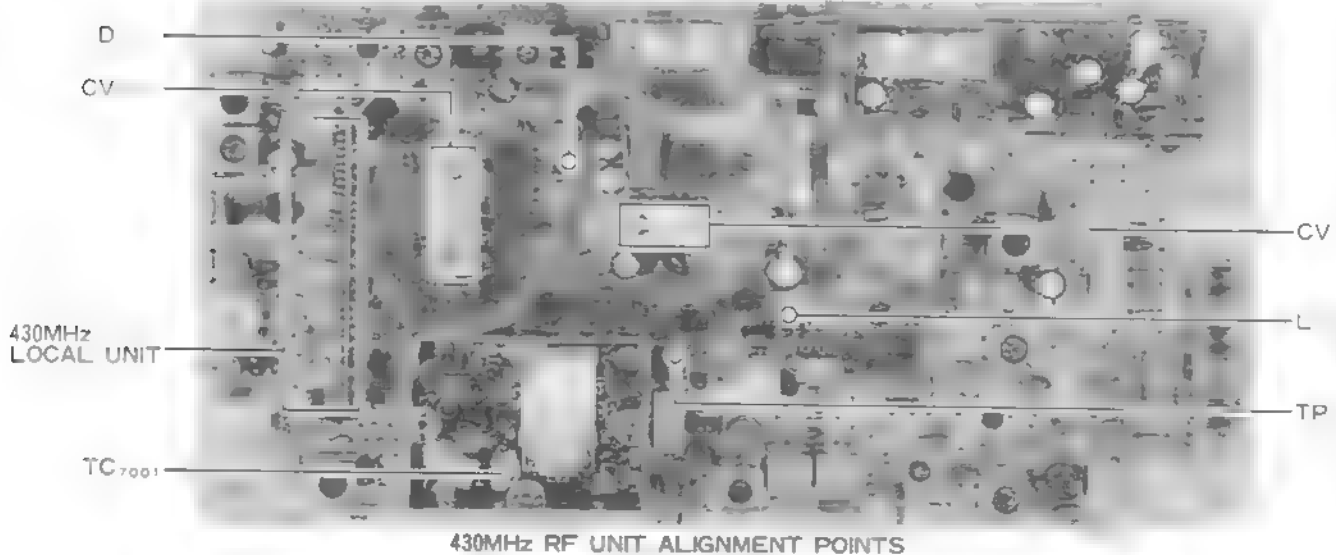
1. Connect the DC voltmeter between the exposed lead of R7712 on the 430 MHz Local Unit and chassis ground. Connect the RF voltmeter to the exposed lead of L7029 on the 430 MHz RF Unit.
2. Set the transceiver to the center of the 70cm band, FM mode.
3. Adjust TC7701 on the 430 MHz Local Unit for 5.0V on the DC voltmeter.
4. Adjust CV7001 on the 430 MHz RF Unit for maximum on the RF voltmeter.
5. Disconnect the voltmeters.



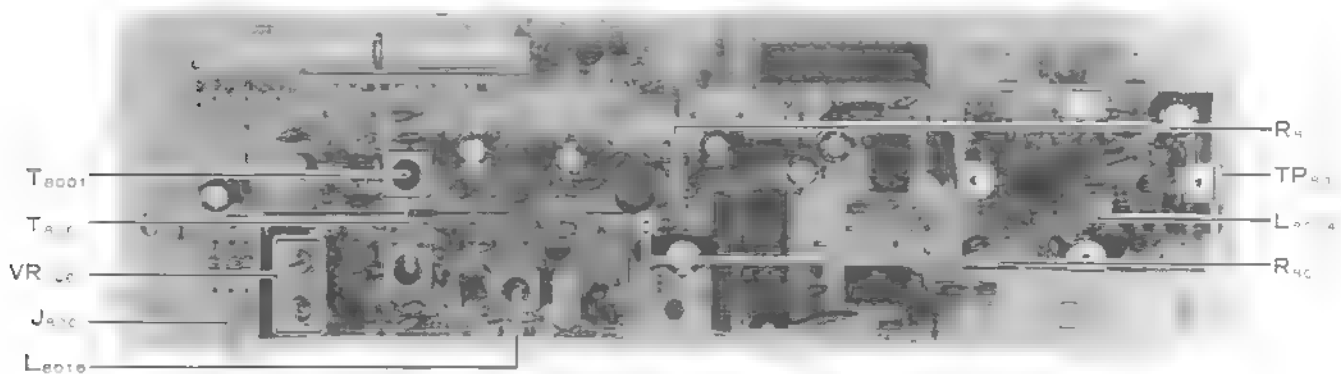
430MHz LOCAL UNIT ALIGNMENT POINTS

I. 430 MHz PLL Main Loop (on 430 MHz RF Unit - requires RF and DC voltmeters)

1. Connect the DC voltmeter between TP7001 and chassis ground. Connect the RF voltmeter to the cathode of D7010.
2. Tune the transceiver to the high edge of the 70cm band, CW mode, and adjust TC7001 for 4.0V (7.5V for versions A1 and A2) on the DC voltmeter.
3. Retune the transceiver to the low band edge and confirm at least 1.0V on the DC voltmeter.
4. Retune the transceiver to the center of the band and adjust CV7002 for peak on the RF voltmeter.
5. Retune the transceiver to the high and low band edges and confirm that the RF voltmeter reads within $\pm 1\text{dB}$ ($\pm 2\text{dB}$ for versions A1 and A2) relative to the level at the center of the band.
6. Disconnect the voltmeters.



430MHz RF UNIT ALIGNMENT POINTS



430MHz PLL UNIT ALIGNMENT POINTS

ALIGNMENT (Transmitter)

II. Transmitter

A. ALC Meter Sensitivity (on TX Unit)

1. Set the METER selector to the DISC/ALC position, and select the CW mode.
2. Tune the transceiver to the center of the 144 MHz band and adjust VR4004 so that the ALC meter just begins to deflect while receiving.

B. 144 MHz Transmitter (on TX Unit and 144 MHz Main Unit - requires dummy load, wattmeter)

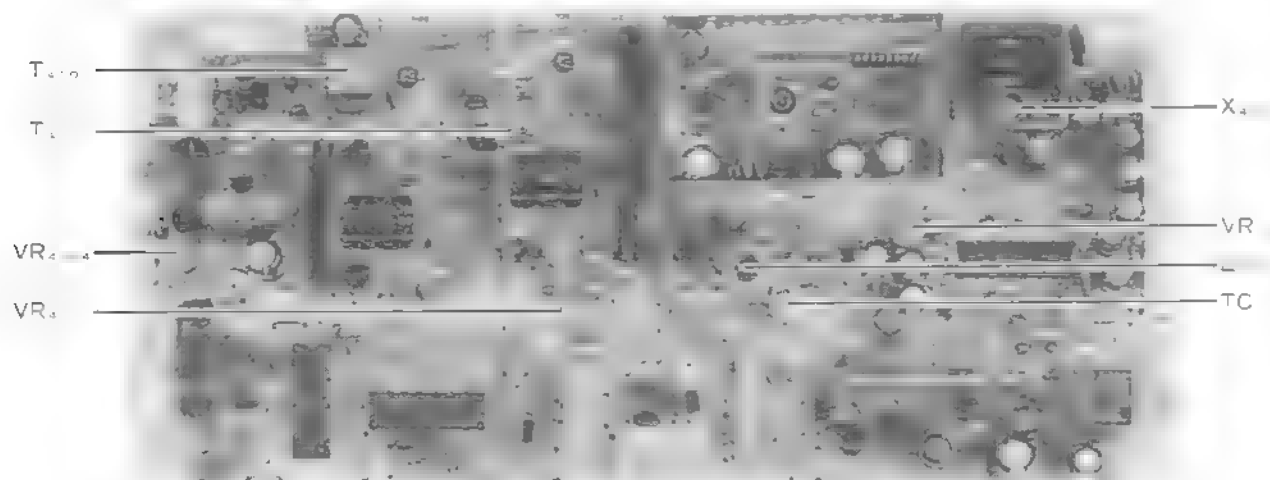
1. Set the METER selector to DISC/ALC and select the FM mode.
2. Tune the transceiver to the center of the 2m band, and connect the dummy load and wattmeter to the 144 MHz antenna jack.
3. Press the MOX button and adjust the DRIVE control for 4W on the wattmeter.
4. Adjust T4002 and T4003 on the TX Unit, and T6008-T6012 on the 144 MHz Main Unit for peak on the wattmeter, reducing the DRIVE control setting if necessary to keep power output below 5W during adjustment.
5. Adjust the DRIVE control for an ALC indication equivalent to "7" on the S-Unit scale, and adjust TC6001 and TC6002 on the 144 MHz Main Unit for peak output.
6. Press the MOX button again to return to receive.

C. 144 MHz AFP (Automatic Final Protection, on 144 MHz Main Unit, requires dummy load, wattmeter and DC voltmeter)

1. Set the transceiver to the FM mode, turn the DRIVE control fully clockwise, and tune to the center of the 2m band.
2. With the dummy load and wattmeter connected to the 144 MHz antenna jack, connect the DC voltmeter to the anode of D6032.
3. Press the MOX button and adjust VR6003 for 1.0V on the voltmeter.
4. Press the MOX button to return to receive, and remove the voltmeter.

D. 144 MHz ALC level & PO Meter Sensitivity (on 144 MHz Main Unit-requires dummy load and wattmeter)

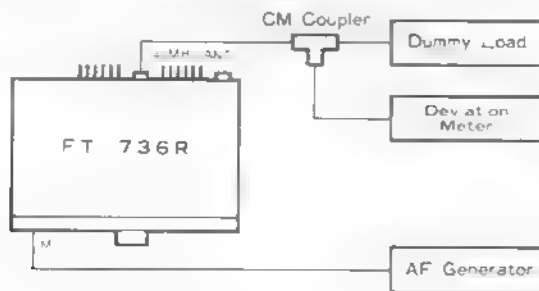
1. Set the transceiver to the center of the 2m band, FM mode, and set the METER selector to the S/PO position.
2. With the dummy load and wattmeter connected to the 144 MHz antenna jack, set the DRIVE control fully clockwise.
3. Press the MOX button and alternately adjust VR6002 for 25W on the wattmeter and VR6004 for an indication of "8" on the PO meter scale, repeating both adjustments several times.
4. Press the MOX button to return to receive.



TX UNIT ALIGNMENT POINTS

(Transmitter) ALIGNMENT

E. 144 MHz FM Deviation (on TX Unit)

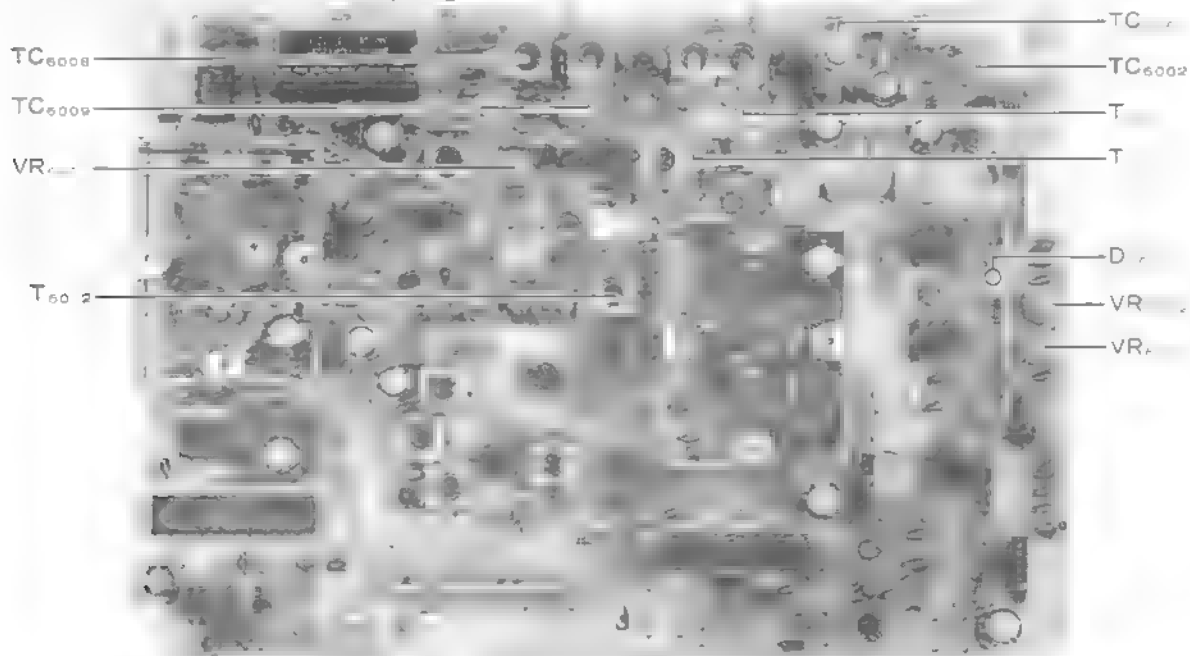


1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to the center of the 144 MHz band, and set the MIC Gain to 12 o'clock and DRIVE fully clockwise.
3. Set the AF generator for 15mV output at 1 kHz.
4. Press the MOX button and adjust VR4001 for ± 4.5 kHz deviation on the deviation meter.
5. Now select the FM-N mode and confirm ± 2 to ± 3 kHz deviation.
6. Press the MOX button again to return to receive.

F. SSB Carrier Point (on TX Unit- requires dummy load, wattmeter and AF generator)

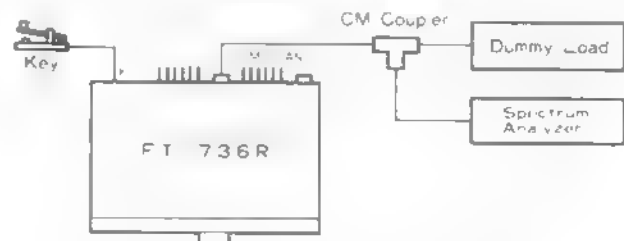
1. Connect the dummy load and wattmeter to the 144 MHz antenna jack, and the AF generator to pin 8 of the MIC jack (pin 7 is ground).

144MHz MAIN UNIT ALIGNMENT POINTS



2. Tune the transceiver to the center of the 2m band in USB mode. Set the MIC gain control to 12 o'clock and the DRIVE control to 9 o'clock. Press the MOX button.
3. While maintaining a constant AF injection level of 1mV, tune the AF generator back and forth between 300 and 2700 Hz while adjusting L4002 so that the power output is the same at both AF injection frequencies.
4. Change to LSB mode and repeat step 3, adjusting L4001.
5. Press the MOX button to return to receive, remove the AF generator.

G. SSB Carrier Balance (on TX Unit)

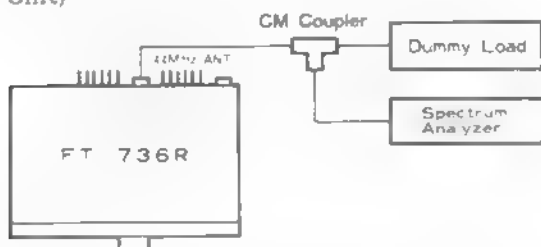


1. Connect the test equipment as shown in the diagram above.
2. In CW mode, tune the transceiver to the center of the 144 MHz band. Set the MIC Gain fully counterclockwise and DRIVE fully clockwise. Also, set the VOX gain control to 9 o'clock.

ALIGNMENT (Transmitter)

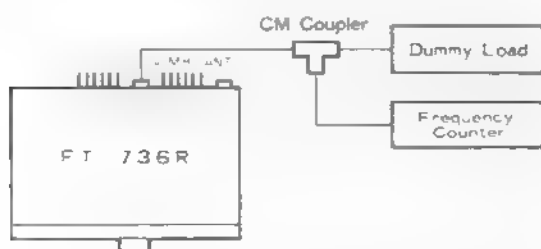
3. Close the key and note the carrier level on the analyzer. Then change to the USB mode.
4. Press the MOX button and adjust VR4003 for minimum carrier level (less than 40dB below the CW carrier level noted in step 3).
5. Change to LSB mode and confirm at least 40dB carrier suppression while transmitting.
6. Press the MOX button to return to receive.

H. 144 MHz TX Mixer (on 144 MHz Main Unit)



1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to the center of the 144 MHz band. Set the MIC Gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust VR6001 so that the spurs at 13.79 MHz on either side of the carrier are at least 65dB down.
4. Press the MOX button again to return to receive.

I. TX Frequency Calibration (on TX Unit)

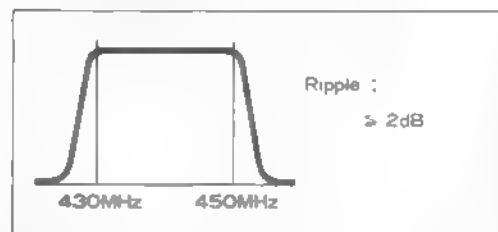


1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to 145.00000 MHz. Set the MIC gain fully counterclockwise and DRIVE fully clockwise.

3. Press the MOX button and adjust the trimmer inside the TCXO (X4002) housing for 145.00000 MHz on the counter.
4. Press the MOX button to return to receive.

J. 430 MHz TX RF (on 430 MHz RF Unit - requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to J7009 on the 430 MHz Main Unit, and couple the spectrum analyzer to the 430 MHz antenna jack.
2. Set the tracking generator output to -30dBm and adjust CV7003, CV7004, TC7002 and TC7003 for the passband shown (reducing injection level, if necessary, to avoid saturation).



K. 430 MHz TX IF, Part I (on 430 MHz RF Unit - requires dummy load and wattmeter)

1. With the dummy load and wattmeter connected to the 430 MHz antenna jack, tune the transceiver to the center of the 70cm band, FM mode.
2. Press the MOX button and set the DRIVE control for 4W output.
3. Adjust T7006-T7010 for maximum deflection on the wattmeter (but do not exceed 5W output: reduce the DRIVE control setting, if necessary).
4. Press the MOX button again to return to receive.

L. 430 MHz AFP (Automatic Final Protection, on 430 MHz RF Unit -requires dummy load and DC voltmeter)

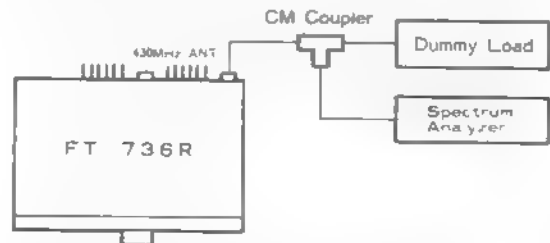
1. With the dummy load connected to the 430 MHz antenna jack, connect the DC voltmeter to the jumper wire (marked "A" in the drawing below) on the 430 MHz RF Unit.
2. Set the transceiver to FM, band center. Set the DRIVE control fully clockwise, and set the METER selector to S/PO. Press the MOX button.
3. Adjust VR7005 for 1.0V on the DC voltmeter.
4. Press the MOX button again to return to receive, and remove the voltmeter.

M. 430 MHz ALC and PO Meter Sensitivity (on 430 MHz RF Unit -requires dummy load and wattmeter)

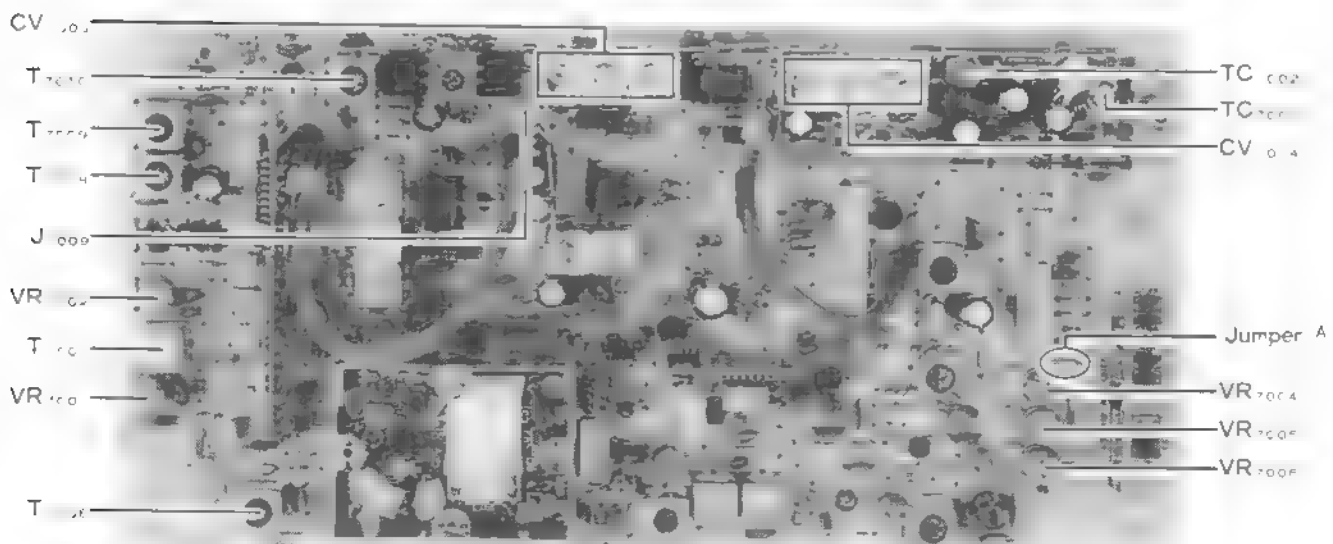
1. With the dummy load connected to the 430 MHz antenna jack, set the transceiver to FM, band center. Set the DRIVE control fully clockwise, and set the METER selector to S/PO.
2. Press the MOX button and alternately adjust VR7004 for 25W output and VR7006 so the transceiver meter deflects to "8" on the PO scale.

3. Repeat the adjustments in step 2 several times, and then press the MOX button again to return to receive.

N. 430 MHz TX Mixer (on 430 RF Unit)



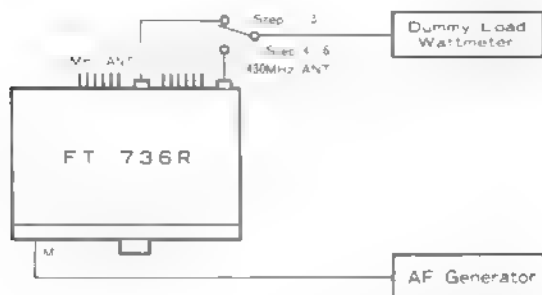
1. Connect the test equipment as shown in the diagram above.
2. Tune the transceiver to the center of the 70cm band, FM mode. Set the MIC gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust VR7002 so that the spurs at 13.79 MHz on either side of the carrier are at least 65dB down.
4. Press the MOX button again to return to receive.



430MHz RF UNIT ALIGNMENT POINTS

ALIGNMENT (Transmitter Receiver)

O. 430 MHz TX IF, Part II (on 430 MHz RF Unit)

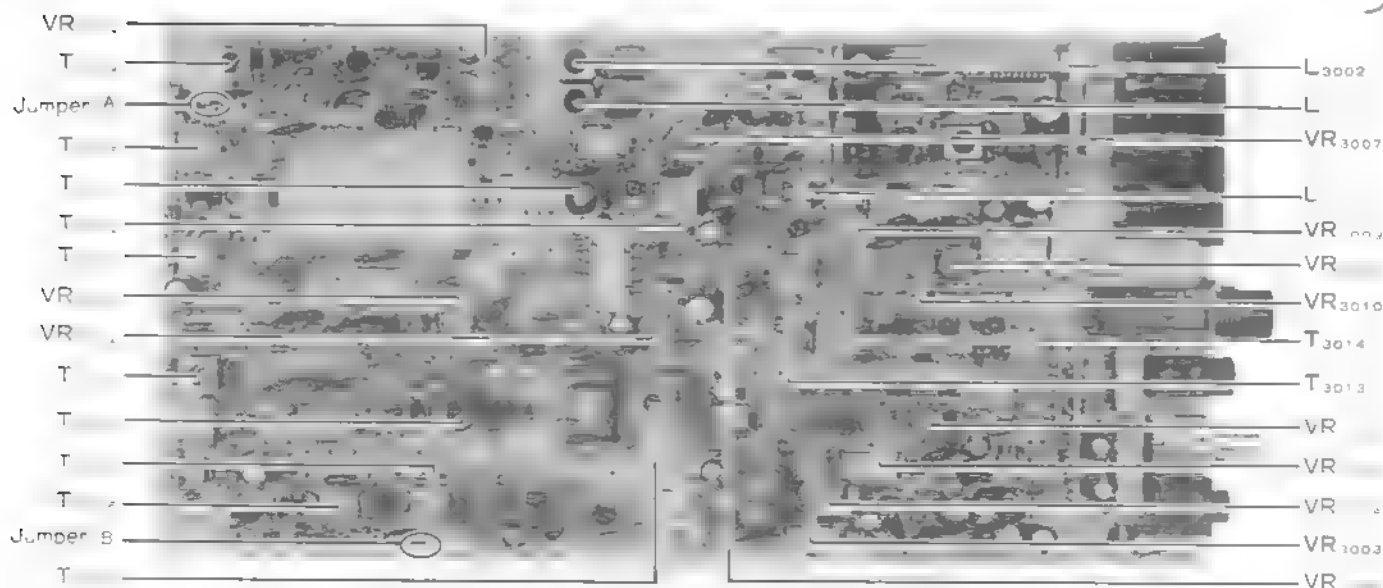


1. Connect the test equipment as shown above, with the AF generator set for 3mV @ 1 kHz.
2. Set the transceiver to USB, at the center of the 144 MHz band.
3. Set the DRIVE control fully clockwise, press the MOX button to transmit, and adjust the MIC gain for 5W output. Press the MOX button again to return to receive.
4. Retune the transceiver, now to the center of the 430 MHz band.
5. Press the MOX button and adjust VR7001 for 5W output.
6. Press the MOX button to return to receive, and disconnect the test equipment.

III. Receiver

A. IF Shift (on RX Unit - requires frequency counter)

1. Connect the counter to jumper "A" in the diagram below.
2. Tune the transceiver to the center of the 430 MHz band, USB mode, and set the SHIFT control to 12 o'clock.
3. Adjust L3001 for 13.2335 MHz \pm 50 Hz on the counter.
4. Confirm at least \pm 1 kHz shift on the counter when the SHIFT control is set to its extremes.
5. Center the SHIFT control and select the LSB mode.
6. Adjust L3002 for 13.2365 MHz \pm 50 Hz on the counter.
7. Repeat step 4.
8. Center the SHIFT control and select the CW mode.
9. Adjust VR3012 for 13.2350 MHz \pm 50 Hz on the counter. In CW mode the counter frequency should not change when the SHIFT control is turned.
10. Disconnect the counter.

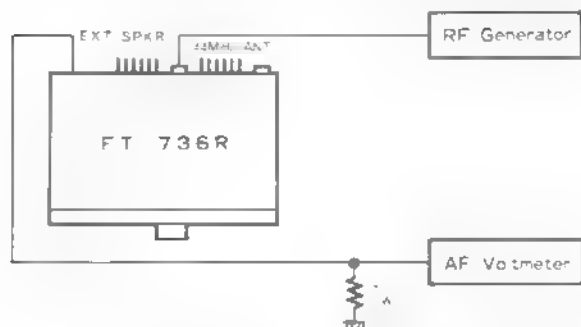


RX UNIT ALIGNMENT POINTS

(Receiver) ALIGNMENT

B. 144 MHz RX (on RX Unit and 144 MHz Main Unit)

1. Connect the test equipment as shown here.



2. Set the transceiver to FM mode, the METER selector to S/PO, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to the center of the 2m band. Inject a 1 kHz tone with ± 7 kHz deviation at a level sufficient to produce an S-7 reading on the S-meter.
4. Adjust T6001, CV6001 and T6004-T6006 on the 144 MHz RX Unit, and T3002-T3005 and T3009 on the RX Unit for peak S-meter deflection.
5. Adjust T3010 on the RX Unit for maximum deflection on the AF voltmeter.
6. Repeat steps 4 and 5 several times.

7. Change to mode to USB and turn off the RF generator's injection modulation.

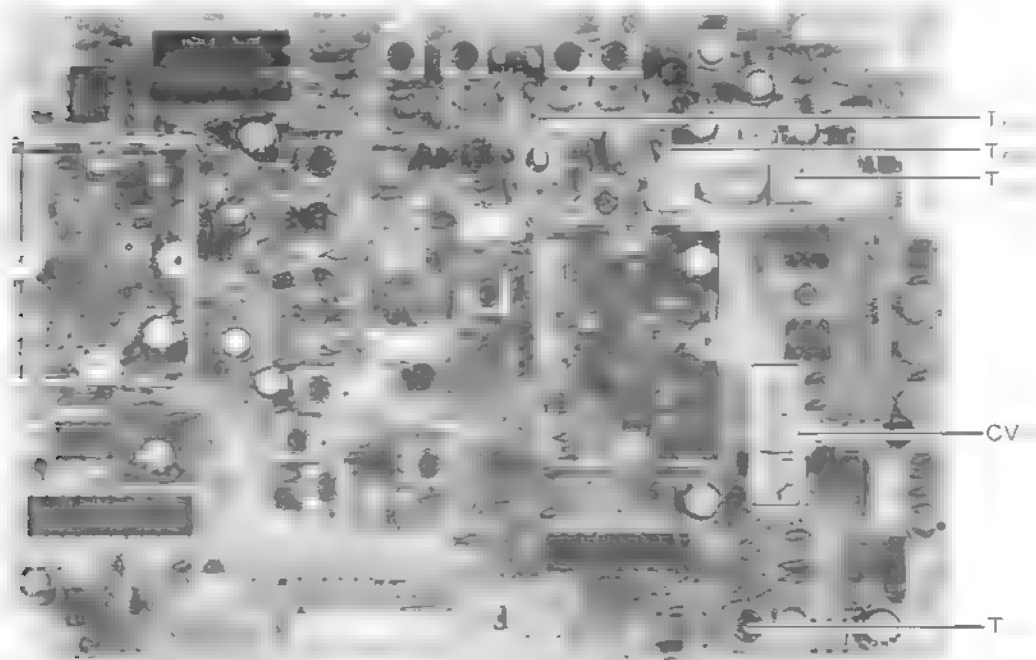
8. Tune the transceiver for a 1.5 kHz heterodyne on the injected carrier, and adjust the injection level for S-7 on the S-meter.

9. Adjust T3011-T3014 on the RX Unit for maximum deflection on the AF voltmeter, reducing the injection level if necessary to maintain an S-7 indication on the S-meter.

10. Remove the test equipment.

C. Noise Squelch (RX Unit - requires RF generator)

1. With the RF generator connected to the 144 MHz antenna jack and switched off, set the transceiver to FM, and set the SQL and RF gain controls fully clockwise.
2. Tune the transceiver to the center of the 2m band and turn the SQL control counterclockwise just until the squelch opens, which should be around 9 o'clock.
3. Set the SQL control to 9 o'clock and adjust VR3003, if necessary, to the point just before the squelch opens with no RF injection.



144MHz MAIN UNIT ALIGNMENT POINTS

ALIGNMENT (Receiver)

4. Set the RF generator for ± 3.5 kHz deviation of a 1 kHz tone at the same frequency as the transceiver, and confirm that the squelch opens with less than -12dBu injection when the SQL control is at 9 o'clock.
 5. Turn off the RF generator, move the SQL control to 10 o'clock, select USB mode and adjust VR3009 so the squelch is just closed.
 6. Adjust the frequency of the RF generator (with no modulation) for a 1.5 kHz heterodyne in the receiver, and reduce the injection level to confirm that the squelch opens with less than 0dBu injection.
 7. Return to FM mode and turn the SQL control fully clockwise. Retune the RF generator to the transceiver frequency, and modulate with ± 3.5 kHz of a 1 kHz tone.
 8. Confirm that the squelch just opens with an injection level of 0dBu ± 5 dB.
- D. Digital Squelch (on RX Unit - requires RF generator)
1. Connect the RF generator to the 144 MHz antenna jack and tune it and the transceiver to the center of the 2m band, FM mode.
 2. Set the RF generator for -11 dBu injection of a 1 kHz tone with ± 3.5 kHz deviation.
 3. Adjust VR3004 so that the squelch just closes (BUSY indicator turns off) while pressing the RESET button.
- E. 144 MHz S-Meter Sensitivity (on RX Unit - requires RF generator)
1. Connect the RF generator to the 144 MHz antenna jack. Tune the transceiver to the center of the 2m band. Select USB mode and set the METER selector to S/PO, SQL control fully counterclockwise and RF gain control fully clockwise.
 2. With no RF injection, adjust VR3011 so that the S-meter just begins to deflect.
 3. Inject a 20dBu carrier (with no modulation), and tune the generator to produce a 1.5 kHz heterodyne in the receiver.
 4. With 20dBu carrier injection, adjust VR3010 for S-9 indication on the S-meter.
 5. Reduce the injection level to 0dBu and adjust VR3008 for S-2 indication. Then repeat step 4 and this step several times.
 6. Select the FM mode, and retune the RF generator to the same frequency as the transceiver (band center). Modulate the alignment signal with ± 3.5 kHz deviation of a 1 kHz tone.
 7. Inject 60dBu and adjust VR3002 for full scale S-meter deflection.
 8. Reduce the injection level to 10dBu and adjust VR3001 for S-7 deflection.
 9. Repeat steps 7 and 8 several times.
- F. RX Carrier Point (on RX Unit - requires RF signal generator and frequency counter)
1. Connect the RF generator to the 144 MHz antenna jack, and the counter to jumper "B" in the diagram on the page 64.
 2. With the transceiver tuned to the center of the 2m band, select the USB mode, set the METER selector to S/PO and the SHIFT control to 12 o'clock.
 3. Tune the RF generator 300 Hz below the displayed transceiver frequency, and set the injection for S-9 indication on the S-meter (with no modulation).
 4. Now tune the RF generator 2700 Hz below the transceiver frequency (without changing injection level) and adjust L3001 again for S-9.
 5. Change to LSB mode and repeat steps 3 and 4, but this time 300 and 2700 Hz above the transceiver frequency, adjusting L3002.
 6. Change to FM mode, turn off the RF generator and adjust VR3012 for 13.2350 MHz ± 50 Hz on the counter.

(Receiver) ALIGNMENT

7. Disconnect the counter.

G. DISC Meter (on RX Unit - requires RF generator)

1. With the RF generator connected to the 144 MHz antenna jack, tune the transceiver and RF generator to the center of the 2m band, select the FM mode, and set the METER selector to DISC/ALC.
2. With 20dBu injection of a 1 kHz tone with ± 3.5 kHz deviation, adjust VR3006 so that the meter deflects to the center ("5" on the PO scale).

H. Scanner Center Stop (on RX Unit- requires RF generator)

1. With the RF generator connected to the 144 MHz antenna jack and set for 20dBu injection with no modulation, tune the transceiver and RF generator to the center of the 2m band, select the FM mode, and set the SQL and RF gain controls fully clockwise.
2. Tune the RF generator frequency back and forth slightly while watching the BUSY indicator, noting the frequencies above and below the transceiver frequency at which the indicator turns off.
3. Calculate the offsets of these frequencies from the frequency displayed on the transceiver. If these are not the same, adjust VR3005 and repeat step 2 until they are.

I. Notch Filter (on RX Unit, requires RF generator)

1. With the RF generator connected to the 144 MHz antenna jack, set for 5dBu injection with no modulation.
2. Tune the transceiver to the center of the 2m band, select the USB mode, and set the following controls:

- a. METER selector to S/PO
- b. SQL control fully clockwise
- c. RF gain fully clockwise
- d. AF gain to 10 o'clock
- e. NOTCH control to 12 o'clock
- f. NOTCH button ON (depressed)

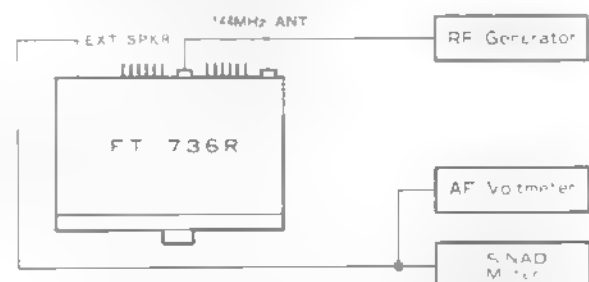
3. Tune the RF generator 1.5 kHz above the receiver frequency and adjust L3011 for minimum S-meter deflection. Then adjust VR3007 for best null of the 1.5 kHz heterodyne in the loudspeaker.

J. Noise Blanker (on RX Unit - requires RF generator and DC voltmeter)

1. With the RF generator connected to the 144 MHz antenna jack, connect the DC voltmeter to point "B" in the diagram on the page 64.
2. Tune the transceiver and RF generator to the center of the 2m band, and inject a 20dBu carrier with no modulation.
3. Select the USB mode, set the RF gain fully clockwise and adjust T3006 and T3007 for minimum deflection on the voltmeter.
4. Disconnect the voltmeter.

K. 144 MHz Receiver Overall Check

1. Connect the test equipment as shown below.



2. Select FM mode, set the METER selector to S/PO, SQL fully counterclockwise, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to the center of the 2m band and set the injection level for S-9 indication with ± 3.5 kHz deviation of a 1 kHz tone.

ALIGNMENT (Receiver)

4. Tune the transceiver and RF generator to the high and low band edges and confirm that the injection level required for S-9 indication is within $\pm 3\text{dB}$ of that at band center.
5. Retune the transceiver and RF generator to band center, and confirm that 12dB SINAD is better than -9dB.
6. Select the USB mode and set the injection level to -10dB with no modulation. Confirm at least 12dB (S+N)/N.
7. Remove the test equipment.

L. 430 MHz RX RF (on 430 MHz Front End Unit - requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to J7801 and the analyzer to J7082. Set the tracking generator level to about -30dBm, and reduce it if necessary to avoid saturation.
2. Adjust TC7801 and CV7801 for less than $\pm 5\text{dB}$ ripple between 430 and 450 MHz.



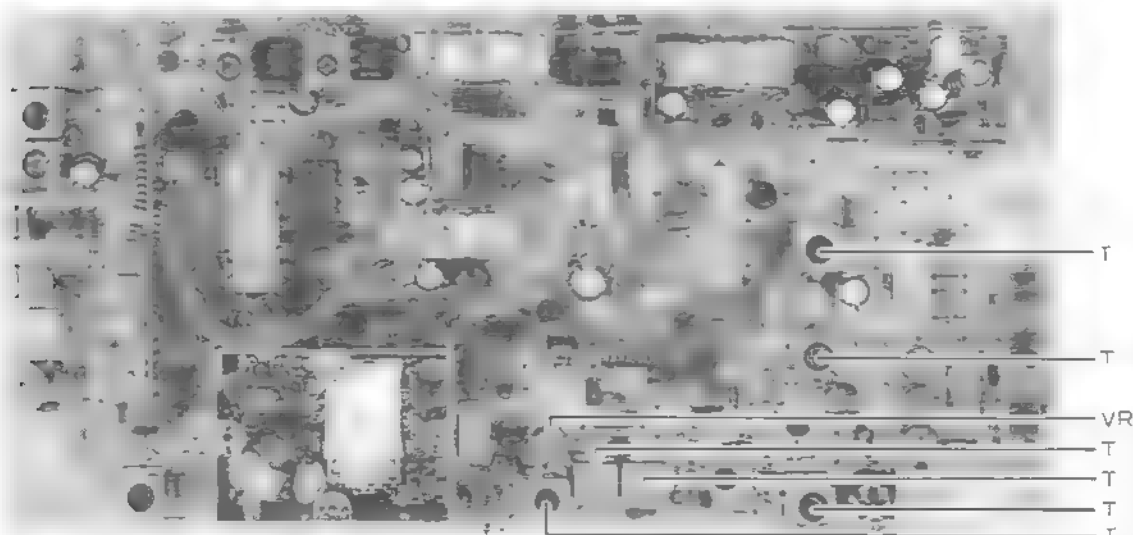
430MHz FRONTEND UNIT ALIGNMENT POINTS

M. 430 MHz RX IF (on 430 MHz RX Unit - requires RF generator)

1. Connect the RF generator to the 430 MHz antenna jack.
2. Set the transceiver to FM, METER selector to S/PO and RF gain fully clockwise.
3. Tune the RF generator and transceiver to the center of the 70cm band, and inject $\pm 7\text{ kHz}$ deviation of a 1 kHz tone at a level sufficient to produce S-7 deflection on the S-meter.
4. Adjust T7019-T7024 for peak S-meter deflection.

N. 430 MHz Module Gain (on 430 MHz RX Unit - requires RF generator)

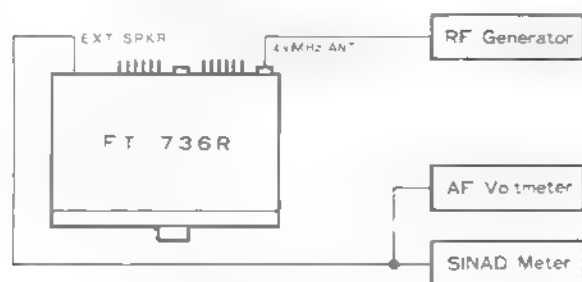
1. Connect the RF generator to the 430 MHz antenna jack.
2. Set the transceiver to USB, METER selector to S/PO and RF gain fully clockwise.
3. Tune the transceiver to the center of the 70cm band.
4. Inject a 20dBu carrier with no modulation 1.5 kHz above the transceiver frequency, and adjust VR7003 for S-9 deflection on the S-meter.



430MHz RX UNIT ALIGNMENT POINTS

O. 430 MHz Receiver Overall Check

1. Connect the test equipment as shown below.



2. Select the FM mode, set the METER selector to S/PO, SQL fully counterclockwise, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to the center of the 70cm band and set the injection level for S-9 indication with ± 3.5 kHz deviation of a 1 kHz tone.
4. Tune the transceiver and RF generator to the high and low band edges and confirm that the injection level required for S-9 indication is within ± 3 dB of that at band center.
5. Retune the transceiver and RF generator to band center, and confirm that 12dB SINAD is better than -9dB.
6. Select the USB mode and set the injection level to -10dB with no modulation. Confirm at least 12dB (S+N)/N.
7. Remove the test equipment.

IV. FEX-736-50

A. 50 MHz PLL Sub Loop (on 50 MHz PLL Unit - requires oscilloscope and DC voltmeter)

1. Connect the 'scope to TP1001 and the DC voltmeter between TP1002 and chassis ground.
2. Tune the transceiver to 52.00000 MHz, CW mode, and adjust T1002-T1005 for maximum amplitude on the 'scope.
3. Retune the transceiver to 52.01999 MHz and adjust L1016 for 4.2V on the voltmeter.
4. Retune the transceiver to 52.02000 MHz and confirm at least 0.6V on the voltmeter.
5. Disconnect the 'scope and voltmeter.

B. 50 MHz PLL VCXO (on 50 MHz PLL Unit - requires DC voltmeter)

1. Connect the voltmeter between the exposed lead of R1055 and chassis ground.
2. Tune the transceiver to 52.01999 MHz, CW mode, and adjust L1009 for 6.0V on the voltmeter.
3. Retune the transceiver to 52.02000 MHz and confirm at least 1.0V on the voltmeter.
4. Disconnect the voltmeter.

C. 50 MHz PLL Main Loop (on 50 MHz PLL Unit - requires DC and RF voltmeters)

1. Connect the DC voltmeter between the exposed lead of R1022 and chassis ground. Connect the RF voltmeter to pin 1 of J1001.
2. Tune the transceiver to 53.99999 MHz, CW mode, and adjust L1003 for 6.0V on the voltmeter.
3. Retune the transceiver to 50.00000 MHz and confirm at least 2.0V on the DC voltmeter.
4. Retune the transceiver to 52.00000 MHz and adjust T1001 for maximum on the RF voltmeter.
5. Disconnect the voltmeters.

ALIGNMENT (FEX-736-50)

D. 50 MHz RX (on 50 RF Unit - require RF generator)

1. Connect the RF generator to the 50 MHz antenna jack.
2. Set the transceiver to FM mode, the METER selector to S/PO and RF gain fully clockwise.
3. Tune the transceiver and RF generator to 52.00000 MHz. Inject a 1 kHz tone with ± 7 kHz deviation at a level sufficient to produce an S-7 reading on the S-meter.
4. Adjust T2001-T2004 and T2007-T2009 for peak S-meter deflection.

E. 50 MHz Module Gain (on 50 MHz RF Unit - requires RF generator)

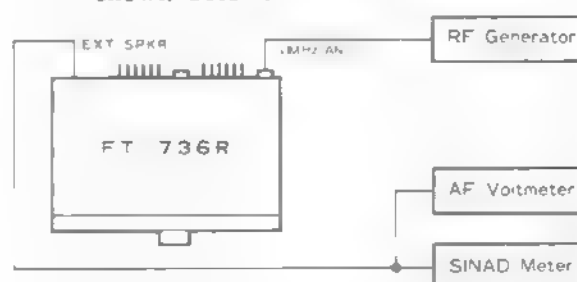
1. Connect the RF generator to the 50 MHz antenna jack.
2. Set the transceiver to USB, METER selector to S/PO and RF gain fully clockwise.
3. Tune the transceiver to 52.00000 MHz.
4. Inject a 20dBu carrier with no modulation 1.5 kHz above the transceiver frequency, and adjust VR2001 for S-9 deflection on the S-meter.

5. Tune the transceiver and RF generator as indicated below, and confirm that the injection level required for S-9 indication is within ± 3 dB of that required at 52.00000 MHz.

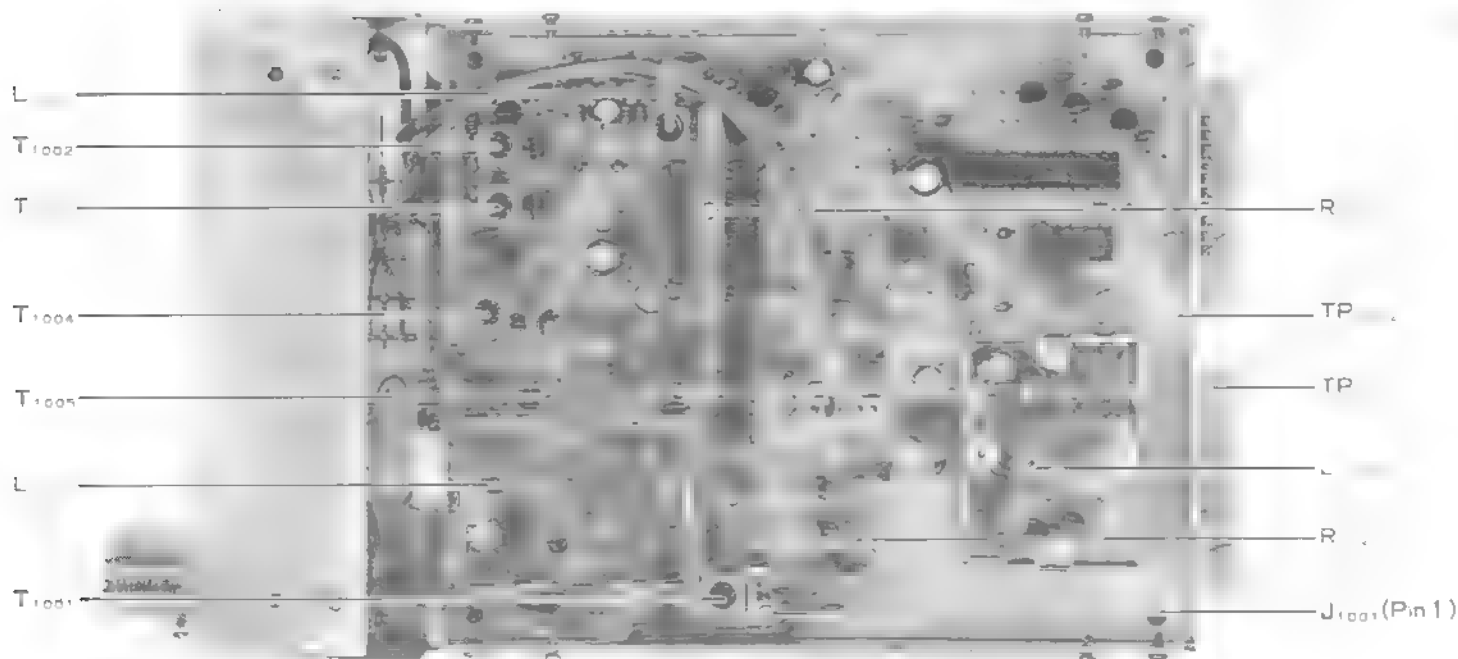
Transceiver	RF Generator
53.99999 MHz	54.00149 MHz
50.00000 MHz	50.00150 MHz

F. 50 MHz Receiver Overall Check

1. Connect the test equipment as shown below.



2. Select the FM mode, set the METER selector to S/PO, SQL fully counterclockwise, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to 52.00000 MHz. Inject a 1 kHz tone with ± 3.5 kHz deviation, and confirm a 12dB SINAD of -9dB or better.



50MHz PLL UNIT ALIGNMENT POINTS

4. Select the USB mode and set the injection level to -10dB with no modulation. Confirm at least 12dB (S+N)/N.
5. Remove the test equipment.

G. 50 MHz TX IF, Part I (on 50 MHz RF Unit - requires dummy load and wattmeter)

1. With the dummy load and wattmeter connected to the 50 MHz antenna jack, tune the transceiver to 52.00000 MHz, FM mode.
2. Press the MOX button and set the DRIVE control for 4W output.
3. Adjust T2010-T2013 and TC2001 for peak on the wattmeter, reducing the DRIVE control setting, if necessary, to keep power output below 5W during adjustments.
4. Press the MOX button again to return to receive.

H. 50 MHz AFP (Automatic Final Protection, on 50 MHz RF Unit, requires dummy load, wattmeter and DC voltmeter)

1. Set the transceiver to the FM mode, turn the DRIVE control fully clockwise, and tune to 52.00000 MHz.

2. With the dummy load and wattmeter connected to the 50 MHz antenna jack, connect the DC voltmeter to the anode of D2019.
3. Press the MOX button and adjust VR2004 for 1.0V on the voltmeter.
4. Press the MOX button to return to receive, and remove the voltmeter.

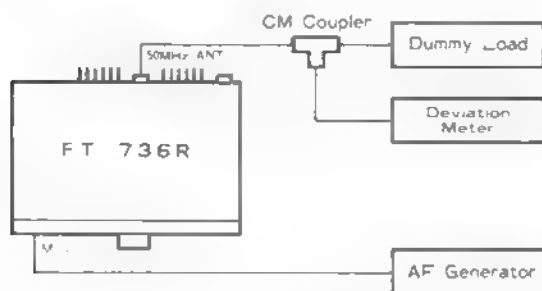
I. 50 MHz ALC level & PO Meter Sensitivity (on 50 MHz RF Unit - requires dummy load and wattmeter)

1. Set the transceiver to 52.00000 MHz, FM mode, and set the METER selector to the S/PO position.
2. With the dummy load and wattmeter connected to the 50 MHz antenna jack, set the DRIVE control fully clockwise.
3. Press the MOX button and alternately adjust VR2005 for 10W on the wattmeter and VR2006 for an indication of "8" on the PO meter scale, repeating both adjustments several times.
4. Press the MOX button to return to receive.



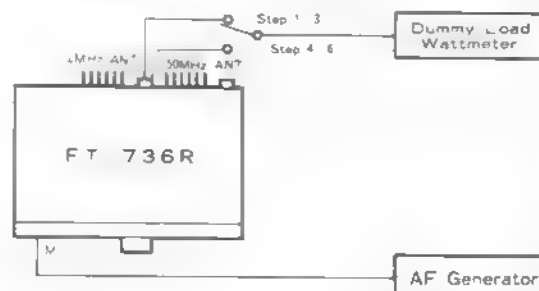
50MHz RF UNIT ALIGNMENT POINTS

J. 50 MHz TX Mixer (on 50 MHz RF Unit)



1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to 52.00000 MHz, FM mode. Set the MIC Gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust VR2003 so that the spurs at 13.79 MHz on either side of the carrier are at least 65dB down.
4. Press the MOX button again to return to receive.

K. 50 MHz TX IF, Part II (on 50 MHz RF Unit)



1. Connect the test equipment as shown above, with the AF generator set for 3mV @ 1 kHz.
2. Set the transceiver to USB, at the center of the 144 MHz band.
3. Set the DRIVE control fully clockwise, press the MOX button to transmit, and adjust the MIC gain for 5W output. Press the MOX button again to return to receive.
4. Retune the transceiver to 52.00000 MHz.
5. Press the MOX button and adjust VR2002 for 5W output.
6. Press the MOX button to return to receive, and disconnect the test equipment.

V. FEX-736-220

A. 220 MHz PLL Sub Loop (on 220 MHz PLL Unit - requires oscilloscope and DC voltmeter)

1. Connect the 'scope to TP1001 and the DC voltmeter between TP1002 and chassis ground.
2. Tune the transceiver to 222.01999 MHz, CW mode, and adjust T1002-T1005 for maximum amplitude on the 'scope.
3. Adjust L1016 for 4.2V on the voltmeter.
4. Retune the transceiver to 222.02000 MHz and confirm at least 0.6V on the voltmeter.
5. Disconnect the 'scope and voltmeter.

B. 220 MHz PLL VCXO (on 220 MHz PLL Unit - requires DC voltmeter)

1. Connect the voltmeter between the exposed lead of R1055 and chassis ground.
2. Tune the transceiver to 222.01999 MHz, CW mode, and adjust L1009 for 6.0V on the voltmeter.
3. Retune the transceiver to 222.02000 MHz and confirm at least 1.0V on the voltmeter.
4. Disconnect the voltmeter.

C. 220 MHz PLL Main Loop (on 220 MHz PLL Unit - requires DC and RF voltmeters)

1. Connect the DC voltmeter between the exposed lead of R1022 and chassis ground. Connect the RF voltmeter to pin 1 of J1001.

2. Tune the transceiver to 224.99999 MHz, CW mode, and adjust L1003 for 6.0V on the voltmeter.
3. Retune the transceiver to 220.00000 MHz and confirm at least 2.0V on the DC voltmeter.
4. Retune the transceiver to 222.50000 MHz and adjust T1001 for maximum on the RF voltmeter.
5. Disconnect the voltmeters.

D. 220 MHz RX (on 220 RF Unit - requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to the 220 MHz antenna jack and the analyzer to J2008. Set the tracking generator level to about -30dBm, reducing the level during adjustment, if necessary, to avoid saturation.
2. Adjust T2001 and CV2001 for less ± 3 dB ripple between 220 and 225 MHz.
3. Remove the test equipment.

E. 220 MHz 2nd Local (on 220 MHz RF Unit - requires oscilloscope)

1. Connect the 'scope to the anode of D2002.
2. Adjust T2016-T2018 for maximum amplitude on the 'scope.

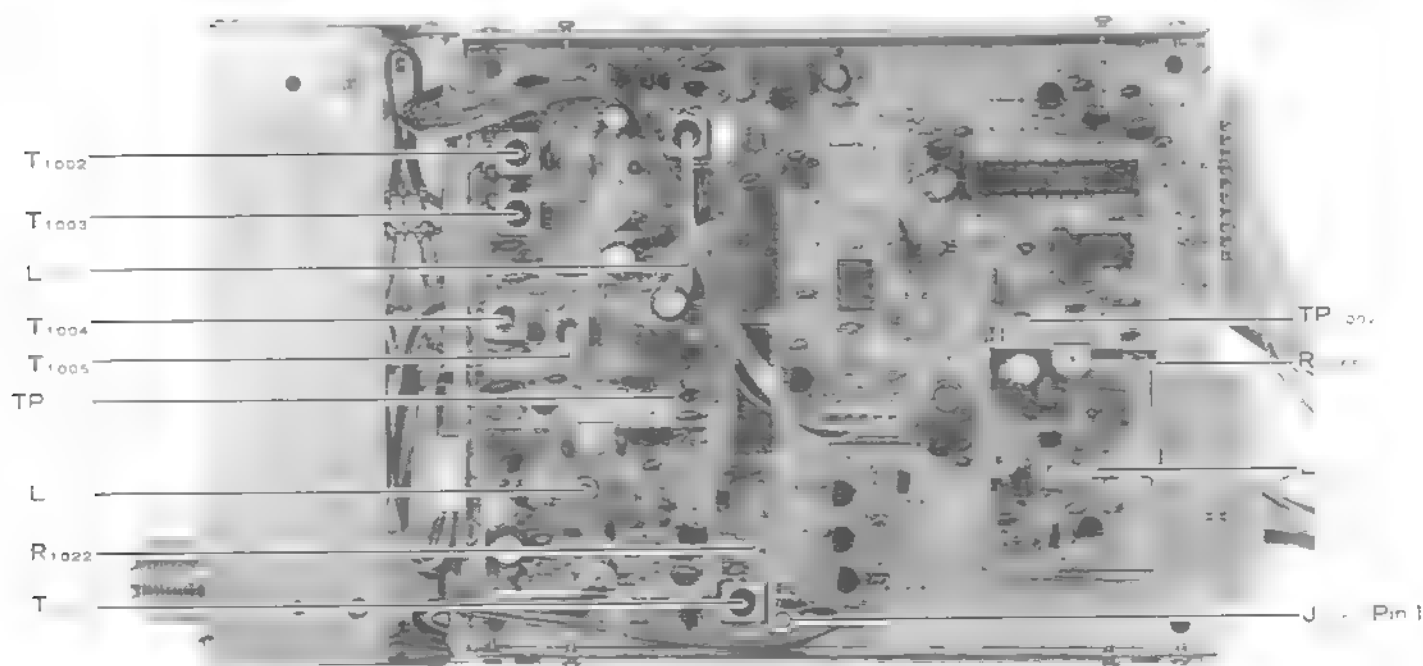
3. Remove the 'scope.

F. 220 MHz RX IF (on 220 MHz RF Unit - requires RF generator)

1. Connect the RF generator to the 220 MHz antenna jack.
2. Set the transceiver to FM, METER selector to S/PO and RF gain fully clockwise.
3. Tune the RF generator and transceiver to 222.50000 MHz, and inject ± 7 kHz deviation of a 1 kHz tone at a level sufficient to produce S-7 deflection on the S-meter.
4. Adjust T2004-T2009 for peak S-meter deflection.

G. 220 MHz Module Gain (on 220 MHz RF Unit - requires RF generator)

1. Connect the RF generator to the 220 MHz antenna jack.
2. Set the transceiver to USB, METER selector to S/PO and RF gain fully clockwise.
3. Tune the transceiver to 222.50000 MHz.
4. Inject a 20dBu carrier with no modulation 1.5 kHz above the transceiver frequency, and adjust VR2001 for S-9 deflection on the S-meter.

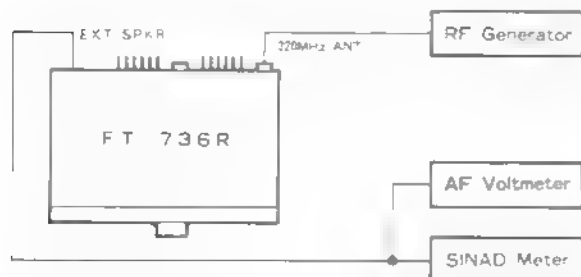


220MHz PLL UNIT ALIGNMENT POINTS

ALIGNMENT (FEX-736-220)

H. 220 MHz Receiver Overall Check

1. Connect the test equipment as shown below.



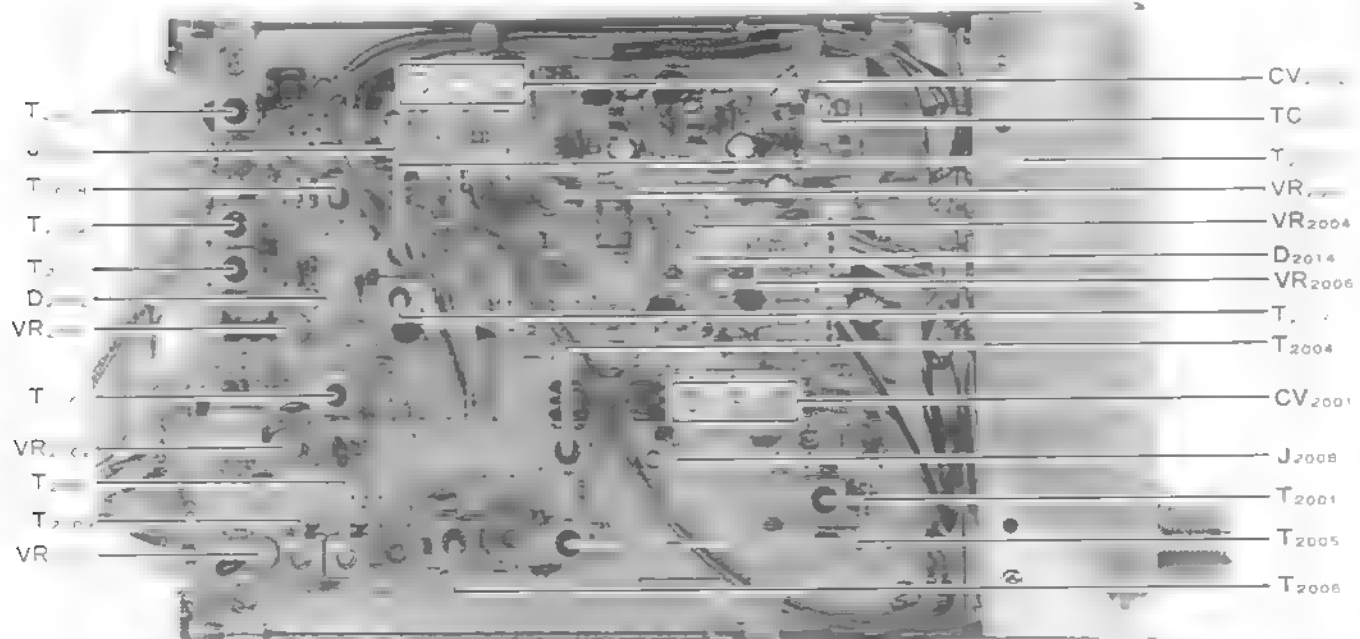
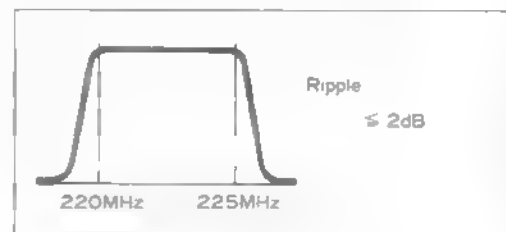
2. Select the FM mode, set the METER selector to S/PO, SQL fully counterclockwise, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to 222.50000 MHz and set the injection level for S-9 indication with ± 3.5 kHz deviation of a 1 kHz tone.
4. Tune the transceiver and RF generator to the high and low band edges and confirm that the injection level required for S-9 indication is within ± 3 dB of that at band center.
5. Retune the transceiver and RF generator to 222.50000 MHz, and confirm that 12dB SINAD is better than -9dB.

6. Select the USB mode and set the injection level to -10dB with no modulation. Confirm at least 12dB (S+N)/N.

7. Remove the test equipment.

I. 220 MHz TX RF (on 220 MHz RF Unit - requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to J2007 and couple the spectrum analyzer to the 220 MHz antenna jack.
2. Set the tracking generator output to -30dBm and adjust CV2002 for the passband shown (reducing injection level, if necessary, to avoid saturation).
3. Remove the test equipment.



220MHz RF UNIT ALIGNMENT POINTS

(FEX-736-220) ALIGNMENT

J. 220 MHz TX IF, Part I (on 220 MHz RF Unit - requires dummy load and wattmeter)

1. With the dummy load and wattmeter connected to the 220 MHz antenna jack, tune the transceiver to 222.50000 MHz, FM mode.
2. Press the MOX button and set the DRIVE control for 4W output.
3. Adjust T2011-T2013 and TC2002 for maximum deflection on the wattmeter (but do not exceed 5W output: reduce the DRIVE control setting, if necessary).
4. Press the MOX button again to return to receive.

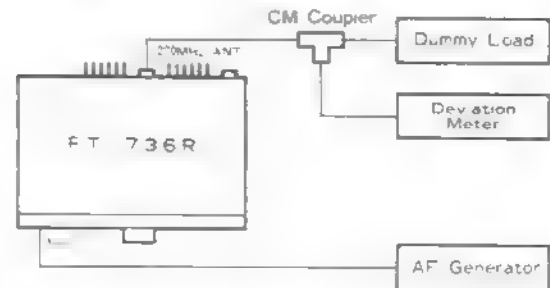
K. 220 MHz AFP (Automatic Final Protection, on 220 MHz RF Unit -requires dummy load and DC voltmeter)

1. With the dummy load connected to the 220 MHz antenna jack, connect the DC voltmeter to the anode of D2014.
2. Set the transceiver to FM, 222.50000 MHz and set the DRIVE control fully clockwise
3. Press the MOX button and adjust VR2004 for 1.0V on the DC voltmeter.
4. Press the MOX button again to return to receive, and remove the voltmeter.

L. 220 MHz ALC level & PO Meter Sensitivity (on 220 MHz RF Unit - requires dummy load and wattmeter)

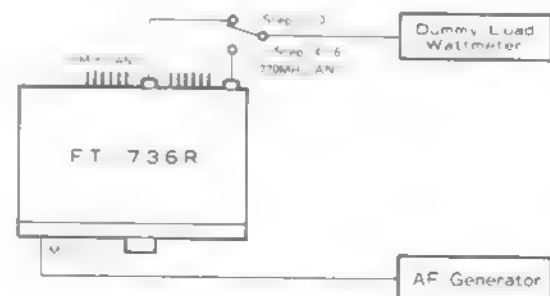
1. Set the transceiver to 222.50000 MHz, FM mode, and set the METER selector to the S/PO position.
2. With the dummy load and wattmeter connected to the 220 MHz antenna jack, set the DRIVE control fully clockwise.
3. Press the MOX button and alternately adjust VR2005 for 25W on the wattmeter and VR2006 for an indication of "8" on the PO meter scale, repeating both adjustments several times.
4. Press the MOX button to return to receive.

M. 220 MHz TX Mixer (on 220 RF Unit)



1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to 222.50000 MHz. Set the MIC gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust VR2003 so that the spurs at 13.79 MHz on either side of the carrier are at least 65dB down.
4. Press the MOX button again to return to receive.
5. Disconnect the test equipment.

N. 220 MHz TX IF, Part II (on 220 MHz RF Unit)



1. Connect the test equipment as shown above, with the AF generator set for 3mV @ 1 kHz.
2. Set the transceiver to USB, at the center of the 144 MHz band.
3. Set the DRIVE control fully clockwise, press the MOX button to transmit, and adjust the MIC gain for 5W output. Press the MOX button again to return to receive.
4. Retune the transceiver to 222.50000 MHz.
5. Press the MOX button and adjust VR2002 for 5W output.
6. Press the MOX button to return to receive, and disconnect the test equipment.

ALIGNMENT (FEX-736-1.2)

VI. FEX-736-1.2

A. 1.2 GHz PLL 2nd Local (on 1.2 GHz PLL Unit - requires DC voltmeter)

1. Connect the voltmeter between R1096 ("A" in the diagram below) and chassis ground.
2. Tune the transceiver to 1280.00000 MHz, FM mode, and adjust TC1001 for 4.0V on the voltmeter.
3. Remove the voltmeter.

B. 1.2 GHz PLL Sub Loop (on 1.2 GHz PLL Unit - requires DC voltmeter)

1. Connect the DC voltmeter between R1025 ("B" in the diagram below) and chassis ground.
2. Tune the transceiver to 1280.01999 MHz, USB mode, and adjust L1008 for 7.5V on the voltmeter.
3. Retune the transceiver to 1280.02000 MHz and confirm at least 1.0V on the voltmeter.
4. Disconnect the voltmeter.

C. 1.2 GHz PLL VCXO (on 1.2 GHz PLL Unit - requires AF and DC voltmeters)

1. Connect the AF millivoltmeter between L1012 ("C" in the diagram below) and chassis ground.
2. Connect the DC voltmeter between TP1001 and chassis ground.

3. Tune the transceiver to 1280.00000 MHz, USB mode, and adjust T1001-T1006 for peak on the AF millivoltmeter.

4. Retune the transceiver to 1280.01999 MHz and adjust L1013 for 4.5V on the DC voltmeter.

5. Retune the transceiver to 1280.02000 MHz and confirm at least 1.0V on the DC voltmeter.

6. Disconnect the voltmeters.

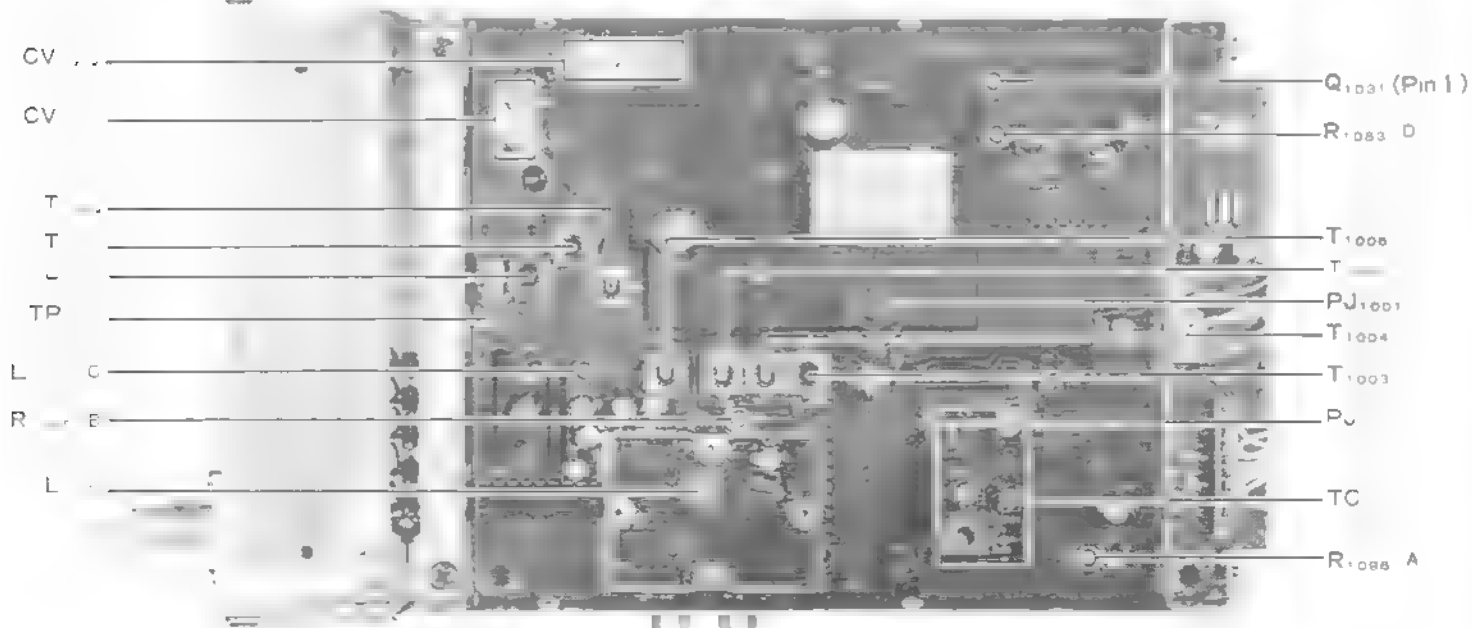
D. 1.2 GHz PLL Main Loop (on 1.2 GHz PLL Unit - requires DC and RF voltmeters)

1. Connect the DC voltmeter between R1083 ("D" in the diagram below) and chassis ground. Connect the RF voltmeter to pin 1 of Q1031.

2. Tune the transceiver to the high band edge, USB mode, and adjust CV1001 and CV1002 for peak on the RF voltmeter. Confirm about 6.0V on the DC voltmeter.

3. Retune the transceiver to the low band edge and confirm at least 1.5V on the DC voltmeter.

4. Disconnect the voltmeters.



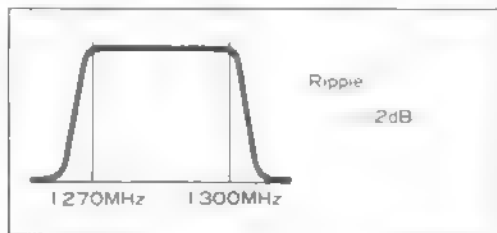
1.2GHz PLL UNIT ALIGNMENT POINTS

E. 1.2 GHz PLL Overall Check (on 1.2 GHz PLL Unit - requires 50-ohm, $\frac{1}{4}$ -watt resistor and RF voltmeter)

1. Disconnect the TMP plug from PJ1002 and connect the 50-ohm resistor and RF voltmeter in its place.
2. Tune the transceiver to 1280.00000 MHz, FM mode, and confirm about -15dBm on the voltmeter.
3. Move the resistor and meter from PJ1002 to PJ1001 and confirm about +5dBm on the RF voltmeter.
4. Remove the resistor and meter, and replace the TMP plugs.

F. 1.2 GHz RX RF (on 1.2 GHz RF Unit- requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to PJ2002 and the analyzer to PJ2003. Set the tracking generator level to about -30dBm, reducing the level during adjustment, if necessary, to avoid saturation.
2. Adjust CV2001 for the passband shown below.
3. Remove the test equipment.



G. 1.2 GHz RX IF (on 1.2 GHz RF Unit - requires RF generator)

1. Connect the RF generator to the 1.2 GHz antenna jack.
2. Set the transceiver to FM, METER selector to S/PO and RF gain fully clockwise.
3. Tune the RF generator and transceiver to 1280.00000 MHz, and inject ± 7 kHz deviation of a 1 kHz tone at a level sufficient to produce S-7 deflection on the S-meter.
4. Adjust T2001-T2010 for peak S-meter deflection.

H. 1.2 GHz Module Gain (on 1.2 GHz RF Unit - requires RF generator)

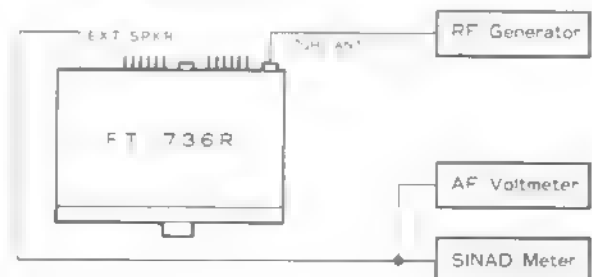
1. Connect the RF generator to the 1.2 GHz antenna jack.
2. Set the transceiver to USB, METER selector to S/PO and RF gain fully clockwise.
3. Tune to 1280.00000 MHz.
4. Inject a 20dBu carrier with no modulation 1.5 kHz above the transceiver frequency, and adjust VR2004 for S-9 S-meter deflection.
5. Tune the transceiver and RF generator as indicated below, and confirm that the injection level required for S-9 indication is within ± 3 dB of that required at 1280.00000 MHz.

Transceiver	RF Generator
1299.99999 MHz	1300.00149 MHz
1260.00000 MHz	1260.00150 MHz

6. Connect the jumper plug at J2001 and retune the transceiver to 1280.00000 MHz.
7. Inject a 40dB carrier with no modulation 1.5 kHz above the transceiver frequency, and adjust TC2001 for S-9 S-meter deflection.

I. 1.2 GHz Receiver Overall Check

1. Connect the test equipment as shown below.



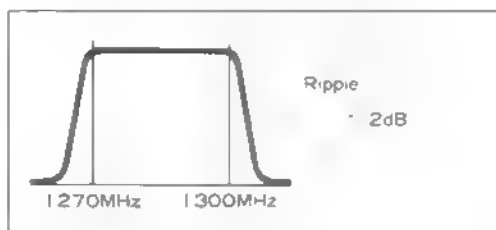
2. Select the FM mode, set the METER selector to S/PO, SQL fully counterclockwise, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to 1280.00000 MHz. Inject a 1 kHz tone with ± 3.5 kHz deviation, and confirm a 12dB SINAD better than -9dB.

ALIGNMENT (FEX-736-1.2)

4. Select the USB mode and set the injection level to -10dB with no modulation. Confirm at least 12dB (S+N)/N.
5. Remove the test equipment.

J. 1.2 GHz TX RF (on 1.2 GHz RF Unit- requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to PJ2004 and the spectrum analyzer to PJ2001.
2. Set the tracking generator output to -30dBm and adjust CV2003 and CV2004 for the passband shown below (reducing injection level, if necessary, to avoid saturation).
3. Remove the test equipment.



K. 1.2 GHz TX IF, Part I (on 1.2 GHz RF Unit - requires dummy load and wattmeter)

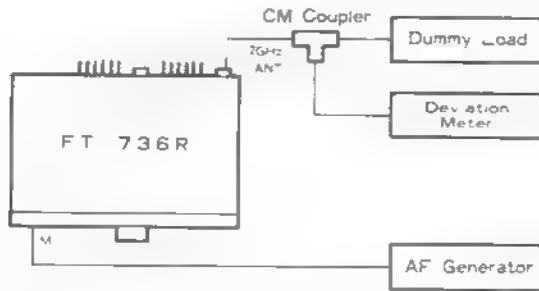
1. With the dummy load and wattmeter connected to the 1.2 GHz antenna jack, tune the transceiver to 1280.00000 MHz, FM mode.
2. Press the MOX button and set the DRIVE control for 4W output.
3. Adjust T2011 and T2013-T2016 for maximum deflection on the wattmeter (but do not exceed 5W output; reduce the DRIVE control setting, if necessary).
4. Press the MOX button again to return to receive.

L. 1.2 GHz ALC level & PO Meter Sensitivity (on 1.2 GHz RF Unit - requires dummy load and wattmeter)

1. Set the transceiver to 1280.00000 MHz, FM mode, and set the METER selector to the S/PO position.
2. With the dummy load and wattmeter connected to the 1.2 GHz antenna jack, set the DRIVE control fully clockwise.
3. Press the MOX button and alternately adjust VR2002 for 10W on the wattmeter and VR2003 for an indication of "8" on the PO meter scale, repeating both adjustments several times.
4. Press the MOX button to return to receive.

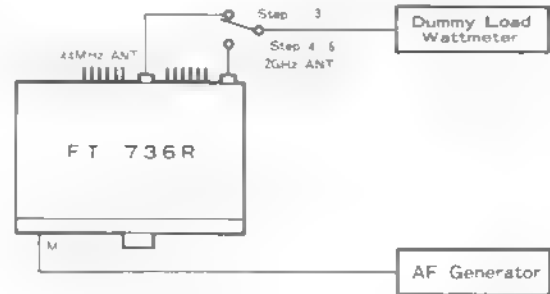
(FEX-736-1.2) ALIGNMENT

M. 1.2 GHz TX Mixer (on 1.2 GHz RF Unit)

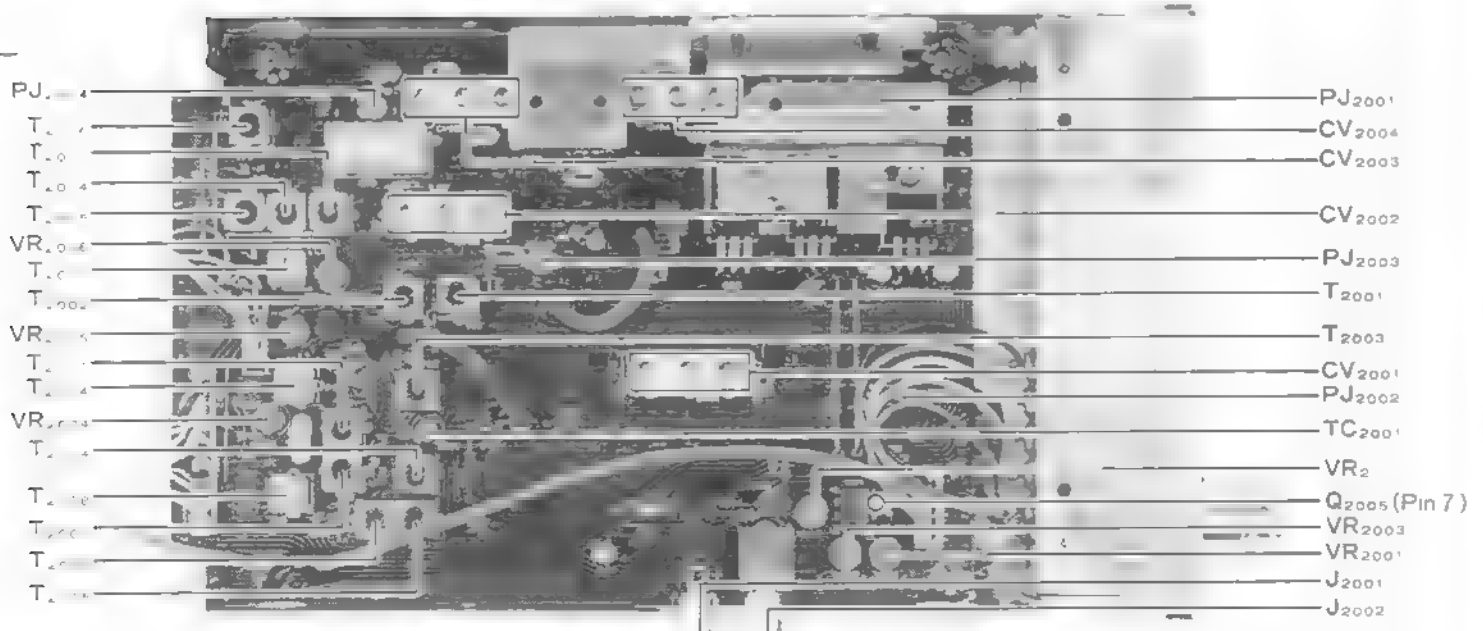


1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to 1280.00000 MHz. Set the MIC gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust VR2006 so that the spurs at 13.79 MHz on either side of the carrier are at least 65dB down.
4. Press the MOX button again to return to receive.
5. Disconnect the test equipment.

N. 1.2 GHz TX IF, Part II (on 1.2 GHz RF Unit)



1. Connect the test equipment as shown above, with the AF generator set for 3mV @ 1 kHz.
2. Set the transceiver to USB, at the center of the 144 MHz band.
3. Set the DRIVE control fully clockwise, press the MOX button to transmit, and adjust the MIC gain for 5W output. Press the MOX button again to return to receive.
4. Retune the transceiver to 1280.00000 MHz, FM mode.
5. Press the MOX button and adjust VR2005 for 5W output.
6. Press the MOX button to return to receive, and disconnect the test equipment.



1 2GHz RF UNIT ALIGNMENT POINTS

PARTS LIST

MAIN CHASSIS						
Q1	Q1000004	IC	uPC408H	T9205523	Wire ASSY	P40 P70
Q2	Q1000005	IC	L-100	T9205524A	Wire ASSY	P42 P4
Q3	Q1000008	IC	IC-9	T9205525	Wire ASSY	P4 P53
Q4	Q10001000	Transistor	2N3640CA	T9205528	Wire ASSY	P45
R1(0W)	J100056A2	Carbon Film RES	1.6W 5.8k ohm	T9205529A	Wire ASSY	P46 P63
C6	K21170002	Feed Through CAP.	50WV 0.001uF	T9205530	Wire ASSY	P47 P46
C7	K21170002	Feed Through CAP.	50WV 0.001uF	T9205531A	Wire ASSY	P48 P11 P12
C8	K21170002	Feed Through CAP.	50WV 0.001uF	T9205532	Wire ASSY	P41 P
C9	K21170002	Feed Through CAP.	50WV 0.001uF	T9205533A	Wire ASSY	P49 P18
C10	K21170002	Feed Through CAP.	50WV 0.001uF	T9205534	Wire ASSY	P50 P5 P6 P9
C11	K21170002	Feed Through CAP.	50WV 0.001uF	T9205535	Wire ASSY	P51 P224 P52 P93 P94
C12	K21170002	Feed Through CAP.	50WV 0.001uF	T9205536B	Wire ASSY	P53 P5
C13	K21170002	Feed Through CAP.	50WV 0.001uF	T9205537	Wire ASSY	P54
C14	K21170002	Feed Through CAP.	50WV 0.001uF	T9205542A	Wire ASSY	P55 P84 P7 P9
C15	K21170002	Feed Through CAP.	50WV 0.001uF	T9205543A	Wire ASSY	P103 P120
				T9205544	Wire ASSY	P56 P18
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				T9205765	Wire ASSY	

PARTS LIST

R6100760A Knob		FT 18D (DRIVE, TONE, RF, NOTCH)		D3005	G2090408	Diode	ISS270
Q6550093 Terminal				D3006	G2090408	Diode	ISS270
Q6550091 Terminal Strip				D3007	G2090408	Diode	ISS270
Q6550098 Terminal				D3008	G2090408	Diode	ISS270
S2000006 Color Cap				D3009	G2090408	Diode	ISS270
Q7000065 Power Supply				D3010	G2090408	Diode	ISS270
RX UNIT				D3011	G2001880F	Diode	IS188FMI
Sy	Sc	So	Se	D3012	G2090338	Diode	ISS81
F2887101A	Printed Circuit Board			D3013	G2090338	Diode	ISS81
C028871AA	PCB with Components w/o AF-LPF UNIT, FM-SCAN UNIT, SSB-SCAN UNIT, 13MHz-RX-PLL UNIT			D3014	G2090338	Diode	ISS81
C028871AB	PCB with Components w/o AF-LPF UNIT, FM-SCAN UNIT, SSB-SCAN UNIT, 13MHz-RX-PLL UNIT			D3015	G2090338	Diode	ISS81
Q3101	G310535A	Transistor	2SC435A	D3016	G2090338	Diode	ISS81
Q3102	G310535B	Transistor	2SC435B	D3017	G2090338	Diode	ISS81
Q3103	G310535C	Transistor	2SC435C	D3018	G2090338	Diode	ISS81
Q3104	G310535D	Transistor	2SC435D	D3019	G2090338	Diode	ISS81
Q3105	G310535E	Transistor	2SC435E	D3020	G2090338	Diode	ISS81
Q3106	G310535F	Transistor	2SC435F	D3021	G2090338	Diode	ISS81
Q3107	G310535G	Transistor	2SC435G	D3022	G2090338	Diode	ISS81
Q3108	G310535H	Transistor	2SC435H	D3023	G2090338	Diode	ISS81
Q3109	G310535I	Transistor	2SC435I	D3024	G2090338	Diode	ISS81
Q3110	G310535J	Transistor	2SC435J	D3025	G2090338	Diode	ISS81
Q3111	G310535K	Transistor	2SC435K	D3026	G2090338	Diode	ISS81
Q3112	G310535L	Transistor	2SC435L	D3027	G2090338	Diode	ISS81
Q3113	G310535M	Transistor	2SC435M	D3028	G2090338	Diode	ISS81
Q3114	G310535N	Transistor	2SC435N	D3029	G2090338	Diode	ISS81
Q3115	G310535O	Transistor	2SC435O	D3030	G2090338	Diode	ISS81
Q3116	G310535P	Transistor	2SC435P	D3031	G2090338	Diode	ISS81
Q3117	G310535Q	Transistor	2SC435Q	D3032	G2090338	Diode	ISS81
Q3118	G310535R	Transistor	2SC435R	D3033	G2090338	Diode	ISS81
Q3119	G310535S	Transistor	2SC435S	D3034	G2090338	Diode	ISS81
Q3120	G310535T	Transistor	2SC435T	D3035	G2090338	Diode	ISS81
Q3121	G310535U	Transistor	2SC435U	D3036	G2090338	Diode	ISS81
Q3122	G310535V	Transistor	2SC435V	D3037	G2090338	Diode	ISS81
Q3123	G310535W	Transistor	2SC435W	D3038	G2090338	Diode	ISS81
Q3124	G310535X	Transistor	2SC435X	D3039	G2090338	Diode	ISS81
Q3125	G310535Y	Transistor	2SC435Y	D3040	G2090338	Diode	ISS81
Q3126	G310535Z	Transistor	2SC435Z	D3041	G2090338	Diode	ISS81
Q3127	G310535A	Transistor	2SC435A	D3042	G2090338	Diode	ISS81
Q3128	G310535B	Transistor	2SC435B	D3043	G2090338	Diode	ISS81
Q3129	G310535C	Transistor	2SC435C	D3044	G2090338	Diode	ISS81
Q3130	G310535D	Transistor	2SC435D	D3045	G2090338	Diode	ISS81
Q3131	G310535E	Transistor	2SC435E	D3046	G2090338	Diode	ISS81
Q3132	G310535F	Transistor	2SC435F	D3047	G2090338	Diode	ISS81
Q3133	G310535G	Transistor	2SC435G	D3048	G2090338	Diode	ISS81
Q3134	G310535H	Transistor	2SC435H	D3049	G2090338	Diode	ISS81
Q3135	G310535I	Transistor	2SC435I	D3050	G2090338	Diode	ISS81
Q3136	G310535J	Transistor	2SC435J	D3051	G2090338	Diode	ISS81
Q3137	G310535K	Transistor	2SC435K	D3052	G2090338	Diode	ISS81
Q3138	G310535L	Transistor	2SC435L	D3053	G2090338	Diode	ISS81
Q3139	G310535M	Transistor	2SC435M	D3054	G2090338	Diode	ISS81
Q3140	G310535N	Transistor	2SC435N	D3055	G2090338	Diode	ISS81
Q3141	G310535O	Transistor	2SC435O	D3056	G2090338	Diode	ISS81
Q3142	G310535P	Transistor	2SC435P	D3057	G2090338	Diode	ISS81
Q3143	G310535Q	Transistor	2SC435Q	D3058	G2090338	Diode	ISS81
Q3144	G310535R	Transistor	2SC435R	D3059	G2090338	Diode	ISS81
Q3145	G310535S	Transistor	2SC435S	D3060	G2090338	Diode	ISS81
Q3146	G310535T	Transistor	2SC435T	D3061	G2090338	Diode	ISS81
Q3147	G310535U	Transistor	2SC435U	D3062	G2090338	Diode	ISS81
Q3148	G310535V	Transistor	2SC435V	D3063	G2090338	Diode	ISS81
Q3149	G310535W	Transistor	2SC435W	D3064	G2090338	Diode	ISS81
Q3150	G310535X	Transistor	2SC435X	D3065	G2090338	Diode	ISS81
Q3151	G310535Y	Transistor	2SC435Y	D3066	G2090338	Diode	ISS81
Q3152	G310535Z	Transistor	2SC435Z	D3067	G2090338	Diode	ISS81
Q3153	G310535A	Transistor	2SC435A	D3068	G2090338	Diode	ISS81
Q3154	G310535B	Transistor	2SC435B	D3069	G2090338	Diode	ISS81
Q3155	G310535C	Transistor	2SC435C	D3070	G2090338	Diode	ISS81
Q3156	G310535D	Transistor	2SC435D	D3071	G2090338	Diode	ISS81
Q3157	G310535E	Transistor	2SC435E	D3072	G2090338	Diode	ISS81
Q3158	G310535F	Transistor	2SC435F	D3073	G2090338	Diode	ISS81
Q3159	G310535G	Transistor	2SC435G	D3074	G2090338	Diode	ISS81
Q3160	G310535H	Transistor	2SC435H	D3075	G2090338	Diode	ISS81
Q3161	G310535I	Transistor	2SC435I	D3076	G2090338	Diode	ISS81
Q3162	G310535J	Transistor	2SC435J	D3077	G2090338	Diode	ISS81
Q3163	G310535K	Transistor	2SC435K	D3078	G2090338	Diode	ISS81
Q3164	G310535L	Transistor	2SC435L	D3079	G2090338	Diode	ISS81
Q3165	G310535M	Transistor	2SC435M	D3080	G2090338	Diode	ISS81
Q3166	G310535N	Transistor	2SC435N	D3081	G2090338	Diode	ISS81
Q3167	G310535O	Transistor	2SC435O	D3082	G2090338	Diode	ISS81
Q3168	G310535P	Transistor	2SC435P	D3083	G2090338	Diode	ISS81
Q3169	G310535Q	Transistor	2SC435Q	D3084	G2090338	Diode	ISS81
Q3170	G310535R	Transistor	2SC435R	D3085	G2090338	Diode	ISS81
Q3171	G310535S	Transistor	2SC435S	D3086	G2090338	Diode	ISS81
Q3172	G310535T	Transistor	2SC435T	D3087	G2090338	Diode	ISS81
Q3173	G310535U	Transistor	2SC435U	D3088	G2090338	Diode	ISS81
Q3174	G310535V	Transistor	2SC435V	D3089	G2090338	Diode	ISS81
Q3175	G310535W	Transistor	2SC435W	D3090	G2090338	Diode	ISS81
Q3176	G310535X	Transistor	2SC435X	D3091	G2090338	Diode	ISS81
Q3177	G310535Y	Transistor	2SC435Y	D3092	G2090338	Diode	ISS81
Q3178	G310535Z	Transistor	2SC435Z	D3093	G2090338	Diode	ISS81
Q3179	G310535A	Transistor	2SC435A	D3094	G2090338	Diode	ISS81
Q3180	G310535B	Transistor	2SC435B	D3095	G2090338	Diode	ISS81
Q3181	G310535C	Transistor	2SC435C	D3096	G2090338	Diode	ISS81
Q3182	G310535D	Transistor	2SC435D	D3097	G2090338	Diode	ISS81
Q3183	G310535E	Transistor	2SC435E	D3098	G2090338	Diode	ISS81
Q3184	G310535F	Transistor	2SC435F	D3099	G2090338	Diode	ISS81
Q3185	G310535G	Transistor	2SC435G	D3100	G2090338	Diode	ISS81
Q3186	G310535H	Transistor	2SC435H	D3101	G2090338	Diode	ISS81
Q3187	G310535I	Transistor	2SC435I	D3102	G2090338	Diode	ISS81
Q3188	G310535J	Transistor	2SC435J	D3103	G2090338	Diode	ISS81
Q3189	G310535K	Transistor	2SC435K	D3104	G2090338	Diode	ISS81
Q3190	G310535L	Transistor	2SC435L	D3105	G2090338	Diode	ISS81
Q3191	G310535M	Transistor	2SC435M	D3106	G2090338	Diode	ISS81
Q3192	G310535N	Transistor	2SC435N	D3107	G2090338	Diode	ISS81
Q3193	G310535O	Transistor	2SC435O	D3108	G2090338	Diode	ISS81
Q3194	G310535P	Transistor	2SC435P	D3109	G2090338	Diode	ISS81
Q3195	G310535Q	Transistor	2SC435Q	D3110	G2090338	Diode	ISS81
Q3196	G310535R	Transistor	2SC435R	D3111	G2090338	Diode	ISS81
Q3197	G310535S	Transistor	2SC435S	D3112	G2090338	Diode	ISS81
Q3198	G310535T	Transistor	2SC435T	D3113	G2090338	Diode	ISS81
Q3199	G310535U	Transistor	2SC435U	D3114	G2090338	Diode	ISS81
Q3200	G310535V	Transistor	2SC435V	D3115	G2090338	Diode	ISS81
Q3201	G310535W	Transistor	2SC435W	D3116	G2090338	Diode	ISS81
Q3202	G310535X	Transistor	2SC435X	D3117	G2090338	Diode	ISS81
Q3203	G310535Y	Transistor	2SC435Y	D3118	G2090338	Diode	ISS81
Q3204	G310535Z	Transistor	2SC435Z	D3119	G2090338	Diode	ISS81
Q3205	G310535A	Transistor	2SC435A	D3120	G2090338	Diode	ISS81
Q3206	G310535B	Transistor	2SC435B	D3121	G2090338	Diode	ISS81
Q3207	G310535C	Transistor	2SC435C	D3122	G2090338	Diode	ISS81
Q3208	G310535D	Transistor	2SC435D	D3123	G2090338	Diode	ISS81
Q3209	G310535E	Transistor	2SC435E	D3124	G2090338	Diode	ISS81
Q3210	G310535F	Transistor	2SC435F	D3125	G2090338	Diode	ISS81
Q3211	G310535G	Transistor	2SC435G	D3126	G2090338	Diode	ISS81
Q3212	G310535H	Transistor	2SC435H	D3127	G2090338	Diode	ISS81
Q3213	G310535I	Transistor	2SC435I	D3128	G2090338	Diode	ISS81
Q3214	G310535J	Transistor	2SC435J	D3129	G2090338	Diode	ISS81
Q3215	G310535K	Transistor	2SC435K	D3130	G2090338	Diode	ISS81
Q3216	G310535L	Transistor	2SC435L	D3131	G2090338	Diode	ISS81
Q3217	G310535M	Transistor	2SC435M	D3132	G2090338	Diode	ISS81
Q3218	G310535N	Transistor	2SC435N	D3133	G2090338	Diode	ISS81
Q3219	G310535O	Transistor	2SC435O	D3134	G2090338	Diode	ISS81
Q3220	G310535P	Transistor	2SC435P	D3135	G2090338	Diode	ISS81
Q3221	G310535Q	Transistor	2SC435Q	D3136	G2090338	Diode	ISS81
Q3222	G310535R	Transistor	2SC435R	D3137	G2090338	Diode	ISS81
Q3223	G310535S	Transistor	2SC435S	D3138	G2090338	Diode	ISS81
Q3224	G310535T	Transistor	2SC435T	D3139	G2090338	Diode	ISS81
Q3225	G310535U	Transistor	2SC435U	D3140	G2090338	Diode	ISS81
Q3226	G310535V	Transistor	2SC435V	D3141	G2090338	Diode	ISS81
Q3227	G310535W	Transistor	2SC435W	D3142	G2090338	Diode	ISS81
Q3228	G310535X	Transistor	2SC435X	D3143	G2090338	Diode	ISS81
Q3229	G310535Y	Transistor	2SC435Y	D3144	G2090338	Diode	ISS81
Q3230	G310535Z	Transistor	2SC435Z	D3145	G2090338	Diode	ISS81
Q3231	G310535A	Transistor	2SC435A	D3146	G2090338	Diode	ISS81
Q3232	G310535B	Transistor	2SC435B	D3147	G2090338	Diode	ISS81
Q3233	G310535C	Transistor	2SC435C	D3148	G2090338	Diode	ISS81
Q3234	G310535D	Transistor	2SC435D	D3149	G2090338	Diode	ISS81
Q3235	G310535E	Transistor	2SC435E	D3150	G2090338	Diode	ISS81
Q3236	G310535F	Transistor	2SC435F	D3151	G2090338	Diode	ISS81
Q3237	G310535G	Transistor	2SC435G	D3152	G2090338	Diode	ISS81
Q3238	G310535H	Transistor	2SC435H	D3153	G2090338	Diode	ISS81
Q3239	G310535I	Transistor	2SC435I	D3154	G2090338	Diode	ISS81
Q3240	G310535J	Transistor	2SC435J	D3155	G2090338	Diode	ISS81
Q3241	G310535K	Transistor	2SC435K	D3156	G2090338	Diode	ISS81
Q3242	G310535L	Transistor	2SC435L	D3157	G2090338	Diode	ISS81
Q3243	G310535M	Transistor	2SC435M	D3158	G2090338	Diode	ISS81
Q3244	G310535N	Transistor	2SC435N	D3159	G2090338	Diode	ISS81
Q3245	G310535O	Transistor	2SC435O	D3160	G2090338	Diode	

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R3013	J02225104	Carbon Film RES	1.6W 100k ohm	UJ	R3061	J01225103	Carbon Film RES	1.6W 10k ohm	PJ
R3014	J01225104	Carbon Film RES	1.6W 100k ohm	PJ	R3062	J01225223	Carbon Film RES	1.6W 22k ohm	PJ
R3015	J02225104	Carbon Film RES	1.6W 100k ohm	UJ	R3063	J01225102	Carbon Film RES	1.6W 1k ohm	PJ
R3016	J01225223	Carbon Film RES	1.6W 22k ohm	PJ	R3064	J01225223	Carbon Film RES	1.6W 22k ohm	PJ
R3017	J02225223	Carbon Film RES	1.6W 22k ohm	UJ	R3065	J01225102	Carbon Film RES	1.6W 1k ohm	PJ
R3018	J02225560	Carbon Film RES	1.6W 56 ohm	UJ	R3066	J01225223	Carbon Film RES	1.6W 22k ohm	PJ
R3019	J02225222	Carbon Film RES	1.6W 2.2k ohm	UJ	R3067	J01225472	Carbon Film RES	1.6W 4.7k ohm	PJ
R3020	J01225562	Carbon Film RES	1.6W 5.6k ohm	PJ	R3068	J02225472	Carbon Film RES	1.6W 4.7k ohm	UJ
R3021	J02225223	Carbon Film RES	1.6W 22k ohm	UJ	R3069	J01225682	Carbon Film RES	1.6W 6.8k ohm	PJ
R3022	J02225221	Carbon Film RES	1.6W 220 ohm	UJ	R3070	J01225682	Carbon Film RES	1.6W 6.8k ohm	PJ
R3023	J01225560	Carbon Film RES	1.6W 56 ohm	PJ	R3071	J02225330	Carbon Film RES	1.6W 3.3k ohm	UJ
R3024	J01225222	Carbon Film RES	1.6W 2.2k ohm	PJ	R3072	J01225682	Carbon Film RES	1.6W 6.8k ohm	PJ
R3025	J02225560	Carbon Film RES	1.6W 56 ohm	UJ	R3073	J01225223	Carbon Film RES	1.6W 22k ohm	PJ
R3026	J01225472	Carbon Film RES	1.6W 4.7k ohm	PJ	R3074	J02225103	Carbon Film RES	1.6W 10k ohm	UJ
R3027	J02225472	Carbon Film RES	1.6W 4.7k ohm	UJ	R3075	J02225470	Carbon Film RES	1.6W 4.7k ohm	UJ
R3028	J01225682	Carbon Film RES	1.6W 6.8k ohm	PJ	R3076	J01225473	Carbon Film RES	1.6W 4.7k ohm	PJ
R3029	J01225330	Carbon Film RES	1.6W 3.3k ohm	UJ	R3077	J02225101	Carbon Film RES	1.6W 100 ohm	UJ
R3030	J02225472	Carbon Film RES	1.6W 4.7k ohm	UJ	R3078	J01225224	Carbon Film RES	1.6W 220k ohm	UJ
R3031	J02225473	Carbon Film RES	1.6W 4.7k ohm	UJ	R3079	J01225101	Carbon Film RES	1.6W 100 ohm	PJ
R3032	J02225473	Carbon Film RES	1.6W 4.7k ohm	UJ	R3080	J02225102	Carbon Film RES	1.6W 1k ohm	UJ
R3033	J02225473	Carbon Film RES	1.6W 4.7k ohm	PJ	R3081	J01225102	Carbon Film RES	1.6W 1k ohm	PJ
R3034	J01225473	Carbon Film RES	1.6W 4.7k ohm	PJ	R3082	J02225333	Carbon Film RES	1.6W 3.3k ohm	UJ
R3035	J01225560	Carbon Film RES	1.6W 56 ohm	PJ	R3083	J01225560	Carbon Film RES	1.6W 56 ohm	PJ
R3036	J02225222	Carbon Film RES	1.6W 2.2k ohm	UJ	R3084	J02225103	Carbon Film RES	1.6W 10k ohm	UJ
R3037	J02225224	Carbon Film RES	1.6W 22k ohm	PJ	R3085	J02225103	Carbon Film RES	1.6W 10k ohm	UJ
R3038	J01225562	Carbon Film RES	1.6W 5.6k ohm	UJ	R3086	J02225103	Carbon Film RES	1.6W 10k ohm	UJ
R3039	J02225102	Carbon Film RES	1.6W 1k ohm	UJ	R3087	J02225103	Carbon Film RES	1.6W 10k ohm	UJ
R3040	J02225153	Carbon Film RES	1.6W 15k ohm	UJ	R3088	J02225103	Carbon Film RES	1.6W 10k ohm	UJ
R3041	J01225153	Carbon Film RES	1.6W 15k ohm	UJ	R3089	J01225103	Carbon Film RES	1.6W 10k ohm	PJ
R3042	J01225101	Carbon Film RES	1.6W 100 ohm	PJ	R3090	J02225332	Carbon Film RES	1.6W 3.3k ohm	UJ
R3043	J02225103	Carbon Film RES	1.6W 10k ohm	UJ	R3091	J01225104	Carbon Film RES	1.6W 100k ohm	PJ
R3044	J01225103	Carbon Film RES	1.6W 1k ohm	PJ	R3092	J01225104	Carbon Film RES	1.6W 100k ohm	PJ
R3045	J02225103	Carbon Film RES	1.6W 10k ohm	UJ	R3093	J01225102	Carbon Film RES	1.6W 1k ohm	PJ
R3046	J02225101	Carbon Film RES	1.6W 100 ohm	UJ	R3094	J01225224	Carbon Film RES	1.6W 220k ohm	PJ
R3051	J02225334	Carbon Film RES	1.6W 330k ohm	UJ	R3095	J02225104	Carbon Film RES	1.6W 100k ohm	UJ
R3052	J01225104	Carbon Film RES	1.6W 100k ohm	PJ	R3096	J02225101	Carbon Film RES	1.6W 100 ohm	UJ
R3053	J01225472	Carbon Film RES	1.6W 4.7k ohm	PJ	R3097	J02225102	Carbon Film RES	1.6W 1k ohm	UJ
R3054	J02225224	Carbon Film RES	1.6W 220k ohm	UJ	R3098	J02225103	Carbon Film RES	1.6W 10k ohm	UJ
R3055	J01225103	Carbon Film RES	1.6W 10k ohm	PJ	R3099	J02225104	Carbon Film RES	1.6W 100k ohm	UJ
R3056	J02225101	Carbon Film RES	1.6W 100 ohm	UJ	R3100	J02225104	Carbon Film RES	1.6W 100k ohm	UJ
R3057	J02225224	Carbon Film RES	1.6W 220k ohm	UJ	R3101	J02225332	Carbon Film RES	1.6W 3.3k ohm	UJ
R3058	J01225562	Carbon Film RES	1.6W 5.6k ohm	PJ	R3102	J02225104	Carbon Film RES	1.6W 100k ohm	UJ
R3059	J01225102	Carbon Film RES	1.6W 1k ohm	PJ	R3103	J01225332	Carbon Film RES	1.6W 3.3k ohm	PJ
R3060	J01225223	Carbon Film RES	1.6W 22k ohm	PJ	R3104	J02225222	Carbon Film RES	1.6W 2.2k ohm	UJ
					R3105	J01225221	Carbon Film RES	1.6W 220 ohm	PJ
					R3106	J02225472	Carbon Film RES	1.6W 4.7k ohm	UJ

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R3111	J02225103	Carbon Film RES.	1/6W 1k ohm	UJ	R3157	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
R3112	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ	R3158	J01225333	Carbon Film RES.	1/6W 33k ohm	PJ
R3113	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ	R3160	J01225222	Carbon Film RES.	1/6W 2.2k ohm	PJ
R3114	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ	R3161	J01225221	Carbon Film RES.	1/6W 220 ohm	PJ
R3115	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ	R3162	J02225331	Carbon Film RES.	1/6W 330 ohm	UJ
R3116	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ	R3163	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3117	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ	R3164	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3118	J01225152	Carbon Film RES.	1/6W 1.5k ohm	PJ	R3168	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R3119	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ	R3169	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
R3120	J02225474	Carbon Film RES.	1/6W 470k ohm	UJ	R3170	J01225101	Carbon Film RES.	1/6W 100 ohm	PJ
R3121	J02225152	Carbon Film RES.	1/6W 1.5k ohm	UJ	R3172	J01225153	Carbon Film RES.	1/6W 15k ohm	PJ
R3122	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ	R3173	J01225102	Carbon Film RES.	1/6W 1k ohm	PJ
R3123	J02225474	Carbon Film RES.	1/6W 470k ohm	UJ	R3174	J24705561	RFS Chip	1/10W 560 ohm	
R3124	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ	R3175	J430523	RFS Chip	1/10W 22k ohm	
R3125	J01225103	Carbon Film RES.	1/6W 10k ohm	PJ	R3176	J02225472	Carbon Film RES.	1/6W 47k ohm	UJ
R3126	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ	R3177	J01225222	Carbon Film RES.	1/6W 2.2k ohm	PJ
R3127	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ	VR3001	J51745472	POT	B 4.7k ohm	
R3128	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ	VR3002	J51745474	POT	B 100k ohm	
R3129	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ	VR3004	J51745473	POT	B 1k ohm	
R3131	J01225272	Carbon Film RES.	1/6W 2.7k ohm	PJ	VR3006	J51745473	POT	B 10k ohm	
R3132	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ	VR3008	J51745472	POT	B 1k ohm	
R3133	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ	VR3009	J51745472	POT	B 22k ohm	
R3134	J02225152	Carbon Film RES.	1/6W 1.5k ohm	UJ	VR3010	J51745473	POT	B 100k ohm	
R3135	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ	VR3011	J51745472	POT	B 1k ohm	
R3136	J02225224	Carbon Film RES.	1/6W 220k ohm	UJ	C3001	K13179008	Ceramic CAP.	F 50WV 0.01uF	
R3137	J02225222	Carbon Film RES.	1/6W 2.2k ohm	PJ	C3002	K40129001	AL. Electro. CAP.	F 10WV 1000uF	
R3138	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ	C3003	K0517551	Ceramic CAP.	RH 50WV 150pF	
R3139	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ	C3004	K517551	Ceramic CAP.	RH 50WV 100pF	
R3140	J02225335	Carbon Film RES.	1/6W 330k ohm	UJ	C3005	K517551	Ceramic CAP.	RH 50WV 2.2pF	
R3141	J02225472	Carbon Film RES.	1/6W 47k ohm	UJ	C3006	K517551	Ceramic CAP.	RH 50WV 10pF	
R3142	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ	C3007	K517551	Ceramic CAP.	F 50WV 0.01uF	
R3143	J01225153	Carbon Film RES.	1/6W 15k ohm	PJ	C3008	K517551	Ceramic CAP.	F 50WV 0.01uF	
R3144	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ	C3009	K517551	Ceramic CAP.	RH 50WV 5pF	
R3145	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ	C3010	K517551	Ceramic CAP.	RH 50WV 1pF	
R3146	J02225223	Carbon Film RES.	1/6W 22k ohm	PJ	C3011	K517551	Ceramic CAP.	F 50WV 0.02uF	
R3147	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ	C3012	K517551	Ceramic CAP.	F 50WV 0.01uF	
R3148	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ	C3013	K517551	Ceramic CAP.	RH 50WV 5pF	
R3149	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ	C3014	K517551	Ceramic CAP.	RH 50WV 1pF	
R3151	J02225471	Carbon Film RES.	1/6W 470 ohm	UJ	C3015	K517551	Ceramic CAP.	F 50WV 0.02uF	
R3152	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ	C3016	K517551	Ceramic CAP.	F 50WV 0.01uF	
R3154	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ	C3017	K517551	Ceramic CAP.	F 50WV 0.01uF	
R3155	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ	C3018	K517551	Ceramic CAP.	F 50WV 0.01uF	
R3156	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ	C3019	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3020	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3021	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3022	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3023	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3024	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3025	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3026	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3027	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3028	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3029	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3030	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3031	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3032	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3033	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3034	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3035	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3036	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3037	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3038	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3039	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3040	K517551	Ceramic CAP.	F 50WV 0.02uF	
					C3041	K517551	Ceramic CAP.	F 50WV 0.02uF	

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Symbol No.	Part No.	Description	Device
J3019	P1090565	Connector (KEY)	
J3020	P1090350	Connector (EXT SPKR)	
J3021	P1090296	Connector (PTT)	
J3022	P1090546	Connector (DATA IN OUT)	
J3023	P0090352	Connector	
R0121120	Shield Case		
R0121130	Shield Cover		
R0121140A	Shield Plate		
R0125620	Holder		
AF LPF UNIT			
Symbol No.	Part No.	Description	Device
F2892101	Printed Circuit Board		
C028921AA	PCB with Components		
Q9001	G3327127C	Transistor	2SC2712GR TE85R
Q9002	G3070007	Transistor	FA1F4N T2D
Q9003	G3327127G	Transistor	2SC2712GR TE85R
Q9004	G3070007	Transistor	FA1F4N T2B
Q9005	G3327127G	Transistor	2SC2712GR TE85R
R9001	J24205104	RES. Chip.	1/10W 100k ohm
R9002	J24205334	RES. Chip.	1/10W 330k ohm
R9003	J24205101	RES. Chip.	1/10W 100 ohm
R9004	J24205472	RES. Chip.	1/10W 47k ohm
R9005	J24205104	RES. Chip.	1/10W 100k ohm
R9006	J24205104	RES. Chip.	1/10W 100k ohm
R9007	J24205103	RES. Chip.	1/10W 10k ohm
R9008	J24205103	RES. Chip.	1/10W 10k ohm
R9009	J24205472	RES. Chip.	1/10W 47k ohm
R9010	J24205472	RES. Chip.	1/10W 47k ohm
R9011	J24205101	RES. Chip.	1/10W 100 ohm
R9012	J24205102	RES. Chip.	1/10W 1k ohm
R9013	J24205472	RES. Chip.	1/10W 47k ohm
C9001	K22141809	CAP. Chip.	25WV 0.1uF
C9002	K22170317	CAP. Chip.	50WV 0.01uF
C9003	K22170309	CAP. Chip.	50WV 0.0022uF
C9004	K22141809	CAP. Chip.	25WV 0.1uF
C9005	K22170305	CAP. Chip.	50WV 0.001uF
C9006	K22141809	CAP. Chip.	25WV 0.1uF
C9007	K78120109	Transistor CAP	16WV 1uF
Q5000057	Lead Frame		
13MHz RX PLL UNIT			
Symbol No.	Part No.	Description	Device
F2892105A	Printed Circuit Board		
C028929AA	PCB with Components		
Q9501	G1090559	IC	LA6324M
Q9502	G3070007	Transistor	FA1F4N T2B
Q9503	G3326197B	Transistor	2SC2619FBTR
R9501	J24205102	RES. Chip.	1/10W 1k ohm
R9502	J24205332	RES. Chip.	1/10W 33k ohm
R9503	J24205104	RES. Chip.	1/10W 100k ohm
R9504	J24205102	RES. Chip.	1/10W 1k ohm
R9505	J24205472	RES. Chip.	1/10W 47k ohm
R9506	J24205103	RES. Chip.	1/10W 10k ohm
R9507	J24205102	RES. Chip.	1/10W 1k ohm
R9508	J24205104	RES. Chip.	1/10W 100k ohm
C9501	K22170817	CAP. Chip.	B 50WV 0.01uF
C9502	K22170817	CAP. Chip.	B 50WV 0.01uF
C9503	K22170817	CAP. Chip.	B 50WV 0.01uF
C9504	K22170817	CAP. Chip.	CH 50WV 5pF
C9505	K22170817	CAP. Chip.	B 50WV 0.01uF
C9506	K22170817	CAP. Chip.	B 50WV 0.01uF
Q5000057	Lead Frame		
FM SCAN UNIT			
Symbol No.	Part No.	Description	Device
F2892103	Printed Circuit Board		
C028923AA	PCB with Components		
Q9401	G1090559	IC	LA6324M
Q9402	G3070007	Transistor	FA1F4N
Q9403	G3070007	Transistor	FA1F4N
D9401	G2070009	Diode	1SS184 TE85R
R9401	J24205334	RES. Chip.	1/10W 330k ohm
R9402	J24205473	RES. Chip.	1/10W 47k ohm
R9403	J24205473	RES. Chip.	1/10W 47k ohm
R9404	J24205105	RES. Chip.	1/10W 1M ohm
R9405	J24205104	RES. Chip.	1/10W 100k ohm
R9406	J24205473	RES. Chip.	1/10W 47k ohm
R9407	J24205473	RES. Chip.	1/10W 47k ohm
R9408	J24205472	RES. Chip.	1/10W 47k ohm
R9409	J24205103	RES. Chip.	1/10W

PARTS LIST

Q4019	G3304600B	Transistor	2SC460B	R4031	J02225332	Carbon Film RES.	1/6W	3.3k ohm	UJ
Q4020	G1090101	IC	uPC1037H	R4032	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
Q4021	G3304600B	Transistor	2SC460B	R4033	J01225153	Carbon Film RES.	1/6W	15k ohm	PJ
Q4022	G4800740L	FET	2SK74L	R4034	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ
Q4023	G1304580C	Transistor	2SC458C	R4035	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
Q4024	G3801921G	FET	2SK192AGR	R4036	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ
Q4025	G3107331Q	Transistor	2SA733AQ	R4037	J02225224	Carbon Film RES.	1/6W	220k ohm	UJ
Q4026	G1090278	IC	uPD4001BC	R4038	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ
Q4027	G1090282	IC	uPD4011BC	R4039	J01225121	Carbon Film RES.	1/6W	220 ohm	PJ
Q4028	G3090074	Transistor	BA1A4M	R4040	J02225474	Carbon Film RES.	1/6W	470k ohm	UJ
Q4029	G3090075	Transistor	BN1A4P	R4041	J0225102	Carbon Film RES.	1/6W	1k ohm	UJ
Q4030	G3115280	Transistor	2SA1528	R4042	J0225104	Carbon Film RES.	1/6W	100k ohm	UJ
Q4031	G3090075	Transistor	BN1A4P	R4043	J01225332	Carbon Film RES.	1/6W	3.3k ohm	UJ
Q4032	G3304580C	Transistor	2SC458C	R4044	J0225103	Carbon Film RES.	1/6W	27k ohm	UJ
Q4033	G3115280	Transistor	2SA1528	R4045	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
Q4034	G3304580C	Transistor	2SC458C	R4046	J0225103	Carbon Film RES.	1/6W	22k ohm	UJ
Q4035	G3115280	Transistor	2SA1528	R4047	J0225103	Carbon Film RES.	1/6W	22k ohm	UJ
Q4036	G3304600B	Transistor	2SC460B	R4048	J01225103	Carbon Film RES.	1/6W	10k ohm	UJ
Q4037	G3304580C	Transistor	2SC458C	R4049	J01225101	Carbon Film RES.	1/6W	100 ohm	UJ
Q4038	G3090080	Transistor	BA1L4M	R4050	J01225223	Carbon Film RES.	1/6W	22k ohm	PJ
Q4039	G3090080	Transistor	BA1L4M	R4051	J01225474	Carbon Film RES.	1/6W	470k ohm	PJ
Q4040	G3090079	Transistor	BA1A4P	R4052	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ
D4001	G2022080	Diode	1S2208	R4053	J11225223	Carbon Film RES.	1/6W	22k ohm	PJ
D4002	G2022080	Diode	1S2208	R4054	J02225103	Carbon Film RES.	1/6W	22k ohm	PJ
D4003	G2090408	Diode	1SS270	R4055	J01225103	Carbon Film RES.	1/6W	2.2M ohm	UJ
D4004	G2090408	Diode	1SS270	R4056	J02225474	Carbon Film RES.	1/6W	47k ohm	UJ
D4005	G2090382	Diode	MC931	R4057	J01225332	Carbon Film RES.	1/6W	3.3k ohm	UJ
D4006	G2090408	Diode	1SS270	R4058	J01225102	Carbon Film RES.	1/6W	1k ohm	UJ
D4007	G2090408	Diode	1SS270	R4059	J02225662	Carbon Film RES.	1/6W	5.6k ohm	UJ
D4008	G2090408	Diode	1SS270	R4060	J02225662	Carbon Film RES.	1/6W	5.6k ohm	UJ
D4009	G2090027	Diode	1SS53	R4061	J02225102	Carbon Film RES.	1/6W	3.6k ohm	UJ
D4010	G2090027	Diode	1SS53	R4062	J01225223	Carbon Film RES.	1/6W	22k ohm	UJ
D4011	G2015880	Diode	1S1588	R4063	J01225103	Carbon Film RES.	1/6W	22k ohm	UJ
D4012	G2015880	Diode	1S1588	R4064	J01225103	Carbon Film RES.	1/6W	22k ohm	UJ
D4013	G2090381	Diode	MC921	R4065	J01225102	Carbon Film RES.	1/6W	1k ohm	UJ
D4014	G2090408	Diode	1SS270	R4066	J02225002	Carbon Film RES.	1/6W	1k ohm	UJ
D4015	G2090200	Diode	1SV80	R4067	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
D4016	G2090007	Varistor	MV-12	R4068	J02225102	Carbon Film RES.	1/6W	3.3k ohm	UJ
D4017	G2090408	Diode	1SS270	R4069	J01225102	Carbon Film RES.	1/6W	56 ohm	UJ
D4018	G2090408	Diode	1SS270	R4070	J01225104	Carbon Film RES.	1/6W	56 ohm	PJ
D4019	G2090408	Diode	1SS270	R4071	J02225102	Carbon Film RES.	1/6W	3.3k ohm	UJ
D4020	G2090283	Diode	MC931	R4072	J01225102	Carbon Film RES.	1/6W	56 ohm	UJ
D4021	G2090408	Diode	1SS270	R4073	J01225102	Carbon Film RES.	1/6W	56 ohm	PJ
D4022	G2090408	Diode	1SS270	R4074	J01225102	Carbon Film RES.	1/6W	47k ohm	PJ
D4023	G2090408	Diode	1SS270	R4075	J01225102	Carbon Film RES.	1/6W	47k ohm	UJ
TH4002	G9090001	Thermistor		R4076	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
XA4001	H0102816	XTAL	HC 49 T 24.4885MHz	R4077	J01225102	Carbon Film RES.	1/6W	680 ohm	UJ
XA4002	H0100100	XTAL OSC	GFS 203H 20.48MHz	R4078	J01225102	Carbon Film RES.	1/6W	220k ohm	UJ
XF4001	H1102123	XTAL Filter	XF 10 7N 252-01	R4079	J01225102	Carbon Film RES.	1/6W	1k ohm	UJ
XF4002	H1102123	XTAL Filter	XF 10 7N 252-01	R4080	J01225102	Carbon Film RES.	1/6W	33 ohm	UJ
XF4003	H1102120	XTAL Filter	13N15A	R4081	J01225102	Carbon Film RES.	1/6W	10k ohm	UJ
CF4001	H3900393	Ceramic Filter	SFF10 7MS2-A	R4082	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R4001	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ				
R4002	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ				
R4003	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ				
R4004	J02225103	Carbon Film RES.	1/6W	33k ohm	UJ				
R4005	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ				
R4006	J01225103	Carbon Film RES.	1/6W	22k ohm	PJ				
R4007	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ				
R4008	J02225102	Carbon Film RES.	1/6W	22k ohm	UJ				
R4009	J01225101	Carbon Film RES.	1/6W	100 ohm	UJ				
R4010	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ				
R4011	J02225102	Carbon Film RES.	1/6W	50k ohm	UJ				
R4012	J02225101	Carbon Film RES.	1/6W	2k ohm	UJ				
R4013	J02225104	Carbon Film RES.	1/6W	330k ohm	UJ				
R4014	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ				
R4015	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ				
R4016	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ				
R4017	J02225474	Carbon Film RES.	1/6W	47k ohm	UJ				
R4018	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ				
R4019	J02225482	Carbon Film RES.	1/6W	6.8k ohm	UJ				
R4020	J02225484	Carbon Film RES.	1/6W	6.8k ohm	UJ				
R4021	J02225482	Carbon Film RES.	1/6W	6.8k ohm	UJ				
R4022	J02225472	Carbon Film RES.	1/6W	47k ohm	UJ				
R4023	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ				
R4024	J02225103	Carbon Film RES.	1/6W	51k ohm	UJ				
R4025	J02225103	Carbon Film RES.	1/6W	51k ohm	UJ				
R4026	J02225223	Carbon Film RES.	1/6W	2.2M ohm	UJ				
R4027	J02225103	Carbon Film RES.	1/6W	18k ohm	UJ				
R4028	J02225103	Carbon Film RES.	1/6W	18k ohm	PJ				
R4029	J01225223	Carbon Film RES.	1/6W	2.2M ohm	PJ				
R4030	J01225472	Carbon Film RES.	1/6W	4.7k ohm	PJ				
R4031	J02225332	Carbon Film RES.	1/6W	3.3k ohm	UJ				
R4032	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ				
R4033	J01225153	Carbon Film RES.	1/6W	15k ohm	PJ				
R4034	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ				
R4035	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ				
R4036	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ				
R4037	J02225224	Carbon Film RES.	1/6W	220k ohm	UJ				
R4038	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ				
R4039	J01225121	Carbon Film RES.	1/6W	220 ohm	PJ				
R4040	J02225474	Carbon Film RES.	1/6W	470k ohm	UJ				
R4041	J0225102	Carbon Film RES.	1/6W	1k ohm	UJ				
R4042	J0225104	Carbon Film RES.	1/6W	100k ohm	UJ				
R4043	J01225332	Carbon Film RES.	1/6W	3.3k ohm	UJ				
R4044	J0225103	Carbon Film RES.	1/6W	27k ohm	UJ				
R4045	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ				
R4046	J0225103	Carbon Film RES.	1/6W	22k ohm	UJ				
R4047	J0225103	Carbon Film RES.	1/6W	22k ohm	UJ				
R4048	J01225103	Carbon Film RES.	1/6W	10k ohm	UJ				
R4049	J01225101	Carbon Film RES.	1/6W	100 ohm	UJ				
R4050	J01225223	Carbon Film RES.	1/6W	22k ohm	PJ				
R4051	J01225474	Carbon Film RES.	1/6W	470k ohm	PJ				
R4052	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ				
R4053	J11225223	Carbon Film RES.	1/6W	22k ohm	PJ				
R4054	J02225103	Carbon Film RES.	1/6W	22k ohm	PJ				
R4055	J01225103	Carbon Film RES.	1/6W	2.2M ohm	UJ				
R4056	J02225474	Carbon Film RES.	1/6W	47k ohm	UJ				
R4057	J01225332	Carbon Film RES.	1/6W	3.3k ohm	UJ				
R4058	J01225102	Carbon Film RES.	1/6W	1k ohm	UJ				
R4059	J02225662	Carbon Film RES.	1/6W	5.6k ohm	UJ				
R4060	J02225662	Carbon Film RES.	1/6W	5.6k ohm	UJ				
R4061	J02225102	Carbon Film RES.	1/6W	3.6k ohm	UJ				
R4062	J01225223	Carbon Film RES.	1/6W	22k ohm	UJ				
R4063	J01225103	Carbon Film RES.	1/6W	22k ohm	UJ				
R4064	J01225103	Carbon Film RES.	1/6W	22k ohm	UJ				
R4065	J01225102	Carbon Film RES.	1/6W	1k ohm	UJ				
R4066	J02225002	Carbon Film RES.	1/6W	1k ohm	UJ				
R4067	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ				
R4068	J02225102	Carbon Film RES.	1/6W	3.3k ohm	UJ				
R4069	J01225102	Carbon Film RES.	1/6W	56 ohm	UJ				
R4070	J01225104	Carbon Film RES.	1/6W	56 ohm	PJ				
R4071	J02225102	Carbon Film RES.	1/6W	3.3k ohm	UJ				
R4072	J01225102	Carbon Film RES.	1/6W	56 ohm	UJ				
R4073	J01225102	Carbon Film RES.	1/6W	56 ohm	PJ				
R4074	J01225102	Carbon Film RES.	1/6W	47k ohm	PJ				
R4075	J01225102	Carbon Film RES.	1/6W	47k ohm	UJ				
R4076	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ				
R4077	J01225102	Carbon Film RES.	1/6W	680 ohm	UJ				
R4078	J01225102	Carbon Film RES.	1/6W	220k ohm	UJ				
R4079	J01225102	Carbon Film RES.	1/6W	1k ohm	UJ				
R4080	J01225102	Carbon Film RES.	1/6W	33 ohm	UJ				
R4081	J01225102	Carbon Film RES.	1/6W	10k ohm	UJ				
R4082	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ				
R4083	J02225472	Carbon Film RES.	1/6W	4.7k ohm	PJ				
R4084	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ				
R4085	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ				
R4086	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ				
R4087	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ				
R4088	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ				
R4089	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ				
R4090	J01225103	Carbon Film RES.	1/6W	56 ohm	UJ				
R4091	J02225104								

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R4128	J01225103	Carbon Film RES	1 6W	10k ohm	PJ	C4057	K05172050	Ceramic CAP.	RH	50WV	5pF
R4129	J01225471	Carbon Film RES	1 6W	470 ohm	PJ	C4058	K05175220	Ceramic CAP.	RH	50WV	22pF
R4130	J01225470	Carbon Film RES	1 6W	47 ohm	PJ	C4059	K05175151	Ceramic CAP.	RH	50WV	150pF
R4131	J01225223	Carbon Film RES	1 6W	22k ohm	PJ	C4060	K05175151	Ceramic CAP.	RH	50WV	150pF
R4132	J01225222	Carbon Film RES	1 6W	22k ohm	PJ	C4061	K05175151	Ceramic CAP.	F	50WV	0.022uF
R4133	J01225223	Carbon Film RES	1 6W	22k ohm	PJ	C4062	K00175220	Ceramic CAP.	SL	50WV	22pF
R4136	J01225221	Carbon Film RES	1 6W	22k ohm	PJ	C4063	K13179010	Ceramic CAP.	F	50WV	0.022uF
R4137	J01225472	Carbon Film RES	1 6W	47k ohm	PJ	C4064	K13179010	Ceramic CAP.	F	50WV	0.022uF
R4138	J01225681	Carbon Film RES	1 6W	68k ohm	PJ	C4065	K13179010	Ceramic CAP.	SL	50WV	22pF
R4139	J01225681	Carbon Film RES	1 6W	6.8k ohm	PJ	C4066	K13179010	Ceramic CAP.	F	50WV	0.022uF
R4140	J01225471	Carbon Film RES	1 6W	470 ohm	PJ	C4067	K13179010	Ceramic CAP.	F	50WV	0.022uF
R4141	J01225223	Carbon Film RES	1 6W	22k ohm	PJ	C4068	K13179010	Ceramic CAP.	F	50WV	0.022uF
R4142	J01225102	Carbon Film RES	1 6W	1k ohm	PJ	C4069	K12171102	Ceramic CAP.	E	50WV	0.001uF
R4143	J01225471	Carbon Film RES	1 6W	470 ohm	PJ	C4070	K12171102	Ceramic CAP.	F	50WV	0.022uF
R4144	J01225471	Carbon Film RES	1 6W	470 ohm	PJ	C4071	K12171102	Ceramic CAP.	E	50WV	0.001uF
R4145	J01225100	Carbon Film RES	1 6W	10 ohm	PJ	C4072	K12171102	Ceramic CAP.	F	50WV	0.01uF
VR4001	J51745473	POT.	B	47k ohm		C4073	K12171102	Ceramic CAP.	E	50WV	0.001uF
VR4003	J51745104	POT.	B	100k ohm		C4074	K12171102	Ceramic CAP.	E	50WV	0.001uF
VR4004	J51745103	POT.	B	10k ohm		C4075	K12171102	Ceramic CAP.	F	50WV	0.01uF
C4001	K19149013	Ceramic CAP.		25WV	0.01uF	C4076	K12171102	Ceramic CAP.	E	50WV	0.001uF
C4002	K05175151	Ceramic CAP.	RH	50WV	10pF	C4077	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4003	K05175151	Ceramic CAP.	CH	50WV	4pF	C4078	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4004	K40109001	AL Electro. CAP.		10WV	100uF	C4079	K13179010	Ceramic CAP.	F	50WV	0.01uF
C4005	K02175101	Ceramic CAP.	CH	50WV	100pF	C4080	K12171102	Ceramic CAP.	E	50WV	0.001uF
C4006	K05175220	Ceramic CAP.	RH	50WV	2pF	C4081	K12171102	Ceramic CAP.	E	50WV	0.001uF
C4007	K05175151	Ceramic CAP.	RH	50WV	150pF	C4082	K40109002	AL Electro. CAP.		10WV	47uF
C4008	K05175151	Ceramic CAP.	RH	50WV	15pF	C4083	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4009	K40109001	AL Electro. CAP.		10WV	100uF	C4084	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4010	K13179010	Ceramic CAP.	F	50WV	0.022uF	C4085	K13179010	Ceramic CAP.	F	50WV	0.01uF
C4012	K40109001	AL Electro. CAP.		10WV	100uF	C4086	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4013	K12171102	Ceramic CAP.	F	50WV	0.001uF	C4087	K13179010	Ceramic CAP.	F	50WV	0.004uF
C4014	K12171102	Ceramic CAP.	E	50WV	0.001uF	C4088	K12171102	Ceramic CAP.	E	50WV	0.001uF
C4015	K40179013	AL Electro. CAP.		50WV	1uF	C4089	K12171102	Ceramic CAP.	E	50WV	0.001uF
C4016	K40109001	AL Electro. CAP.		10WV	100uF	C4090	K70147105	Tantalum CAP.		25WV	1uF
C4017	K13179010	Ceramic CAP.	F	50WV	0.022uF	C4091	K40109001	AL Electro. CAP.		10WV	100uF
C4018	K40179016	AL Electro. CAP.		50WV	1uF	C4092	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4019	K19149004	Ceramic CAP.		25WV	0.0033uF	C4093	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4020	K19149005	Ceramic CAP.		25WV	0.01uF	C4094	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4021	K19149004	Tantalum CAP.		35WV	0.02uF	C4095	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4022	K19149004	Tantalum CAP.		35WV	0.02uF	C4096	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4023	K19149002	Ceramic CAP.		25WV	0.0033uF	C4097	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4024	K19149002	Ceramic CAP.		25WV	0.01uF	C4098	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4025	K19149002	Ceramic CAP.		25WV	0.01uF	C4099	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4026	K19149002	Ceramic CAP.		25WV	0.012uF	C4100	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4027	K40129004	AL Electro. CAP.		16WV	10uF	C4101	K40129004	AL Electro. CAP.		16WV	10uF
C4028	K12171102	Ceramic CAP.	E	50WV	0.001uF	C4102	K40129013	AL Electro. CAP.		50WV	1uF
C4029	K40179013	AL Electro. CAP.		50WV	1uF	C4103	K40179016	AL Electro. CAP.		50WV	0.1uF
C4030	K40179013	AL Electro. CAP.		50WV	1uF	C4104	K70147105	Tantalum CAP.		10WV	1uF
C4032	K40129004	AL Electro. CAP.		16WV	10uF	C4105	K40179013	AL Electro. CAP.		50WV	1uF
C4033	K19149025	Ceramic CAP.		25WV	0.1uF	C4106	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4034	K40179012	AL Electro. CAP.		50WV	4.7uF	C4107	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4035	K40129004	AL Electro. CAP.		16WV	10uF	C4108	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4036	K70147105	Tantalum CAP.		25WV	1uF	C4109	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4037	K00175151	Ceramic CAP.	SL	50WV	15pF	C4110	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4038	K13179010	Ceramic CAP.	F	50WV	0.022uF	C4111	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4039	K00175151	Ceramic CAP.	SL	50WV	15pF	C4112	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4040	K00175220	Ceramic CAP.	SL	50WV	2pF	C4113	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4041	K00175151	Ceramic CAP.	SL	50WV	150pF	C4114	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4042	K13179010	Ceramic CAP.	F	50WV	0.022uF	C4115	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4043	K13179010	Ceramic CAP.	F	50WV	0.022uF	C4116	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4044	K13179010	Ceramic CAP.	F	50WV	0.022uF	C4117	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4045	K13179010	Ceramic CAP.	E	50WV	0.001uF	C4118	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4046	K13179010	Ceramic CAP.	F	50WV	0.022uF	C4119	K40129054	AL Electro. CAP.		16WV	47uF
C4047	K40179013	AL Electro. CAP.		50WV	1uF	C4120	K00175151	Ceramic CAP.	SL	50WV	100pF
C4048	K19149025	Ceramic CAP.		25WV	0.1uF	C4121	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4049	K19149029	Ceramic CAP.		25WV	0.004uF	C4122	K70147105	Tantalum CAP.		10WV	4.7uF
C4050	K19149029	Ceramic CAP.		25WV	0.015uF	C4123	K40129012	AL Electro. CAP.		10WV	6.8uF
C4051	K12171102	Ceramic CAP.	E	50WV	0.001uF	C4124	K19149021	Ceramic CAP.		25WV	0.047uF
C4052	K40129004	AL Electro. CAP.		16WV	10uF	C4125	K19149021	Ceramic CAP.		25WV	0.047uF
C4053	K40179012	AL Electro. CAP.		50WV	4.7uF	TC4001	K91000026	Variable CAP.		10pF	
						T4001	L0021533	Coil			
						T4002	L0021536	Coil			
						T4003	L0021536	Coil			
						L4001	L1190149	M RFC		1mH	
						L4002	L1190262	M RFC		22uH	
						L4003	L1190262	M RFC		10uH	
						L4004	L1190262	M RFC		220uH	
						L4005	L1190262	M RFC		220uH	
						L4006	L1190262	M RFC		0.68uH	
						J4001	P0090524	Connector			
						J4002	P0090532	Connector			

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R6097	J02225101	Carbon Film RES.	1/6W	100 ohm	PJ	K40109001	AL. Electro. CAP.	10WV	100uF
R6117	J01225471	Carbon Film RES.	1/2W	470 ohm	T	K13179008	Ceramic CAP.	50WV	0.01uF
R6118	J02225103	Carbon Film RES.	1/6W	10k ohm	U	K13179014	Ceramic CAP.	50WV	0.01uF
R6119	J01225471	Carbon Film RES.	1/2W	470 ohm	U	K12171102	Ceramic CAP.	50WV	0.01uF
	J02225102	Carbon Film RES.	1/6W	10k ohm	U	K00173100	Ceramic CAP.	50WV	0.01uF
					U	K00173100	Ceramic CAP.	50WV	0.01uF
					U	K12171102	Ceramic CAP.	50WV	0.01uF
					U	K00173100	Ceramic CAP.	50WV	0.01uF
					U	K00173100	Ceramic CAP.	50WV	0.01uF
					U	K12171102	Ceramic CAP.	50WV	0.01uF
					U	K00173100	Ceramic CAP.	50WV	0.01uF
					U	K00173100	Ceramic CAP.	50WV	0.01uF
					U	K12171102	Ceramic CAP.	50WV	0.01uF
					U	K00173100	Ceramic CAP.	50WV	0.01uF
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					U	K12171102	Ceramic CAP.	50WV	0.01uF
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					U	K12171102	Ceramic CAP.	50WV	0.01uF
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					U	K12171102	Ceramic CAP.	50WV	0.01uF
					U	K00173100	Ceramic CAP.	50WV	0.01uF
					U	K00173100	Ceramic CAP.	50WV	0.01uF
					U	K12171102	Ceramic CAP.	50WV	0.01uF
					U	K			

PARTS LIST

C6148	K13179008	Ceramic CAP	F	50WV	0.01uF	J6006	P0090526	Connector	
C6149	K13179008	Ceramic CAP	F	50WV	0.01uF	J6007	P0090525	Connector	
C6150	K13179008	Ceramic CAP	F	50WV	0.01uF	J6008	P0090524	Connector	
C6151	K13179008	Ceramic CAP	F	50WV	0.01uF	J6009	P0090532	Connector	
C6152	K02172020	Ceramic CAP	CK	50WV	2pF	IP6001	Q5000036	TP G	MK 1095
C6153	K40129004	AL. Electro. CAP	F	16WV	10uF	IP6002	Q5000036	TP G	MK 1095
C6154	K13179008	Ceramic CAP	F	50WV	0.01uF	IP6003	Q5000036	TP G	MK 1095
C6155	K00172050	Ceramic CAP	SL	50WV	5pF	IP6004	Q5000036	TP G	MK 1095
C6156	K40179011	Ceramic CAP	F	50WV	3.3uF				
C6157	K13179008	Ceramic CAP	F	50WV	0.01uF				
C6158	K13179014	Ceramic CAP	F	50WV	0.01uF				
C6159	K13179014	Ceramic CAP	F	50WV	0.01uF				
C6160	K19149013	Ceramic CAP	F	25WV	0.01uF				
C6161	K12171102	Ceramic CAP	E	50WV	0.01uF				
C6162	K00175101	Ceramic CAP	SL	50WV	10pF				
C6163	K12171102	Ceramic CAP	E	50WV	0.01uF				
C6164	K12171102	Ceramic CAP	E	50WV	0.01uF				
C6165	K12171102	Ceramic CAP	E	50WV	0.01uF				
C6166	K00175101	Ceramic CAP	SL	50WV	10pF				
C6167	K12171102	Ceramic CAP	E	50WV	0.01uF				
C6168	K12171102	Ceramic CAP	E	50WV	0.01uF				
C6169	K70161104	Tantalum CAP	F	35WV	0.01uF				
C6170	K40109001	AL. Electro. CAP	F	10WV	100uF				
C6171	K00175101	Ceramic CAP	SL	50WV	100pF				
C6172	K13179008	Ceramic CAP	F	50WV	0.01uF				
C6173	K22170805	CAP. Chip	CH	50WV	10pF				
C6174	K22170805	CAP. Chip	B	50WV	0.01uF				
C6175	K22170805	CAP. Chip	B	50WV	0.01uF				
C6176	K22170805	CAP. Chip	B	50WV	0.01uF				
C6177	K22170805	CAP. Chip	B	50WV	0.01uF				
C6178	K22170805	CAP. Chip	B	50WV	0.01uF				
C6179	K22170805	CAP. Chip	B	50WV	0.01uF				
C6180	K22170805	CAP. Chip	B	50WV	0.01uF				
C6181	K22170805	CAP. Chip	B	50WV	0.01uF				
C6182	K22170805	CAP. Chip	B	50WV	0.01uF				
C6183	K22170805	CAP. Chip	B	50WV	0.01uF				
C6001	K41000028	Variable CAP		10pF					
C6002	K91000055	Variable CAP		6pF					
T6001	L0020345	Coil							
T6002	L0020345	Coil							
T6003	L0020345	Coil							
T6004	L0020345	Coil							
T6005	L0020345	Coil							
T6006	L0020345	Coil							
T6007	L0020345	Coil							
T6008	L0020345	Coil							
T6009	L0020345	Coil							
T6010	L0020345	Coil							
T6011	L0020345	Coil							
T6012	L0020345	Coil							
T6013	L0020345	Coil							
T6014	L0020345	Coil							
T6015	L0020345	Coil							
T6016	L0020345	Coil							
T6001	L1020033	RFC							
T6002	L1020033	RFC							
T6003	L1020033	Coil							
T6004	L1020033	Coil							
T6005	L1020033	Coil							
T6006	L1020033	RFC							
T6007	L1190236	M RFC							
T6008	L1190236	M RFC							
T6009	L1190236	M RFC							
T6010	L1190236	M RFC							
T6011	L1190236	M RFC							
T6012	L1190236	M RFC							
T6013	L1190236	M RFC							
T6014	L1190236	M RFC							
T6015	L1190236	M RFC							
T6016	L1190236	M RFC							
T6017	L1190236	M RFC							
T6018	L1190236	M RFC							
T6019	L1190236	M RFC							
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T6024	L1190236	M RFC							
T6025	L1190236	M RFC							
T6026	L1190236	M RFC							
T6027	L1190236	M RFC							
CV6001	L4020080	Helical Resonator							
FB6001	L9190001	Ferrite Beads							
J6001	P1090210	Connector							
J6002	P0090525	Connector							
J6003	P0090526	Connector							
J6004	P1090210	Connector							
J6005	P0090527	Connector							
J6006	P0090526	Connector							
J6007	P0090525	Connector							
J6008	P0090524	Connector							
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J6107	P0090532	Connector							
J6108	P0090532	Connector							
J6109	P0090532	Connector							
J6110	P0090532	Connector							
J6111	P0090532	Connector							
J6112	P0090532	Connector							
J6113	P0090532	Connector							
J6114	P0090532	Connector							

PARTS LIST

144MHz SUB VCO UNIT				430MHz RF UNIT			
Qty	Part No.	Description	Device	Qty	Part No.	Description	Device
	F2927000	Printed Circuit Board			F288811A	Printed Circuit Board	
	C028270AA	PCB with Components			C028882AA	PCB with Components w/o VCO UNIT, 430MHz ALC UNIT, 430MHz LOCAL UNIT, PLL IC UNIT	
					C028882AB	PCB with Components w/ VCO UNIT, 430MHz ALC UNIT, 430MHz LOCAL UNIT, PLL IC UNIT	
Q6004	G3805070F	FET	2SR507F	Q7003	G3333550	Transistor	2SC3355
Q6025	G3333550	Transistor	2SC3355	Q7004	G3333550	Transistor	2SC3355
D6015	G2090180	Diode	FC53M-5	Q7007	G3333550	Transistor	2SC3355
D6016	G2090180	Diode	FC53M-5	Q7008	G12744	IC	uPC1656C
R6078	J02225360	Carbon Film RES	1.6W 56 ohm	Q7010	G3802410G	FET	2SK241GR
R6079	J02225360	Carbon Film RES	1.6W 33 ohm	Q7011	G4801220L	FET	3SK122L
R6080	J02225360	Carbon Film RES	1.6W 330 ohm	Q7012	G3802410G	FET	2SK241GR
R6081	J02225360	Carbon Film RES	1.6W 33k ohm	Q7013	G3802410G	FET	2SK241GR
R6082	J02225360	Carbon Film RES	1.6W 10k ohm	Q7014	G4801220L	FET	3SK122L
R6083	J02225360	Carbon Film RES	1.6W 100 ohm	Q7015	G3802410G	FET	2SK241GR
R6084	J02225360	Carbon Film RES	1.6W 100 ohm	Q7016	G12744	IC	uPC1656C
R6085	J02225360	Carbon Film RES	1.6W 56 ohm	Q7017	G3802410G	FET	2SK241GR
C6105	K13179008	Ceramic CAP.	F 50WV 0.0047uF	Q7018	G3802410G	FET	2SK241GR
C6106	K13179008	Ceramic CAP.	SL 50WV 2pF	Q7019	G3802410G	FET	2SK241GR
C6107	K13179008	Ceramic CAP.	CK 50WV 2pF	Q7020	G4801220L	FET	3SK122L
C6108	K13179008	Ceramic CAP.	B 50WV 0.001uF	Q7021	G3802410G	FET	2SK241GR
C6109	K13179008	Ceramic CAP.	RH 50WV 0.001uF	Q7022	G4801220L	FET	3SK122L
C6110	K13179008	Ceramic CAP.	RH 50WV 18pF	Q7023	G4801220L	FET	3SK122L
C6111	K13179008	Ceramic CAP.	F 50WV 0.001uF	Q7024	G3802410G	FET	2SK241GR
C6112	K40109001	AL. Electro. CAP.	10WV 100uF	Q7025	G3802410G	FET	2SK241GR
C6113	K0873080	Ceramic CAP.	RH 50WV 8pF	Q7026	G3802410G	FET	2SK241GR
C6114	K0873080	Ceramic CAP.	RH 50WV 8pF	Q7027	G3802410G	FET	2SK241GR
C6115	K12171102	Ceramic CAP.	CK 50WV 0.001uF				
C6116	K02172020	Ceramic CAP.	CK 50WV 2pF				
C6117	K02172020	Ceramic CAP.	SL 50WV 2pF				
C6118	K13179008	Ceramic CAP.	F 50WV 0.001uF				
C6119	K13179008	Ceramic CAP.	F 50WV 0.001uF				
C6120	K13179008	Ceramic CAP.	F 50WV 0.001uF				
C6121	K13179008	Ceramic CAP.	F 50WV 0.001uF				
L6016	L1190242	M.RFC	10uH				
L6017	L1190242	M.RFC	0.47uH				
L6018	L1190242	M.RFC	0.47uH				
L6019	L1190242	M.RFC	0.47uH				
L6020	L1190242	M.RFC	0.47uH				
L6021	L1190242	M.RFC	0.47uH				
L6022	L0020852	Coil					
L6023	L0021359	Coil					
L6024	L0021359	Coil					
FR6103	L9190001	Ferrite Beads					
FR6104	L9190001	Ferrite Beads					
	R0082770B	VCO Case A					
144MHz PA UNIT				430MHz RF UNIT			
Qty	Part No.	Description	Device	Qty	Part No.	Description	Device
	F2887104	Printed Circuit Board			F288811A	Printed Circuit Board	
	C028874AA	PCB with Components: 10W Model			C028882AA	PCB with Components w/o VCO UNIT, 430MHz ALC UNIT, 430MHz LOCAL UNIT, PLL IC UNIT	
	C028874AB	PCB with Components: 25W Model			C028882AB	PCB with Components w/ VCO UNIT, 430MHz ALC UNIT, 430MHz LOCAL UNIT, PLL IC UNIT	
Q6501(10W)	G1090295	IC	M57713	Q7003	G3333550	Transistor	2SC3355
Q6501(25W)	G1090474	IC	M57727	Q7004	G3333550	Transistor	2SC3355
D6501	G2090137	Diode	VI308	Q7007	G3333550	Transistor	2SC3355
D6502	G2090144	Diode	1SV178	Q7008	G12744	IC	uPC1656C
D6503	G2090144	Diode	1SV178	Q7010	G3802410G	FET	2SK241GR
D6504	G2090118	Diode	1SS37	Q7011	G4801220L	FET	3SK122L
D6505	G2090118	Diode	1SS37	Q7012	G3802410G	FET	2SK241GR
R6501	J31309002	RES	1W 0.1 ohm	Q7013	G3802410G	FET	2SK241GR
R6502(25W)	J31309002	RES	1W 0.1 ohm	Q7014	G4801220L	FET	3SK122L
R6503	J02243103	Carbon Film RES	1.2W 150 ohm	Q7015	G3802410G	FET	2SK241GR
R6504	J02243103	Carbon Film RES	1.4W 10k ohm	Q7016	G12744	IC	uPC1656C
R6505	J02243103	Carbon Film RES	1.4W 10k ohm	Q7017	G3802410G	FET	2SK241GR
C6502	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q7018	G3802410G	FET	2SK241GR
C6503	K13179008	Ceramic CAP.	F 50WV 0.01uF	Q7019	G3802410G	FET	2SK241GR
C6504	K40129004	AL Electro. CAP	16WV 10uF	Q7020	G4801220L	FET	3SK122L
C6505	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q7021	G3802410G	FET	2SK241GR
				Q7022	G4801220L	FET	3SK122L
				Q7023	G4801220L	FET	3SK122L
				Q7024	G3802410G	FET	2SK241GR
				Q7025	G3802410G	FET	2SK241GR
				Q7026	G3802410G	FET	2SK241GR
				Q7027	G3802410G	FET	2SK241GR

PARTS LIST

Q7028	G3115280	Transistor	2SA1528	R7075	J02225101	Carbon Film RES	1/6W	100 ohm	UJ
Q7029	G3115280	Transistor	2SA1528	R7076	J02225471	Carbon Film RES	1/6W	470 ohm	UJ
Q7030	G3090079	Transistor	BA1A4P	R7077	J02225101	Carbon Film RES	1/6W	100 ohm	UJ
Q7031	G3304580C	Transistor	2SC458C	R7091	J01225223	Carbon Film RES	1/6W	2.2M ohm	PJ
Q7032	G3304580C	Transistor	2SC458C	R7092	J01225473	Carbon Film RES	1/6W	47k ohm	PJ
Q7033	G380440G	FET	2SK341GR	R7093	J01225470	Carbon Film RES	1/6W	47 ohm	PJ
Q7034	G3090079	Transistor	BA1A4P	R7094	J01225102	Carbon Film RES	1/6W	1k ohm	PJ
D7003	G2090408	Diode	1SS270	R7095	J01225360	Carbon Film RES	1/6W	56 ohm	PJ
D7004	G2090027	Diode	1SS53	R7096	J02225473	Carbon Film RES	1/6W	47k ohm	UJ
D7005	G2090027	Diode	1SS53	R7097	J01225473	Carbon Film RES	1/6W	47k ohm	PJ
D7006	G2060004	Diode	1SS270TJ	R7098	J01225271	Carbon Film RES	1/6W	270 ohm	PJ
D7007	G2090027	Diode	1SS53	R7099	J01225360	Carbon Film RES	1/6W	56 ohm	PJ
D7008	G2015550	Diode	1S1555	R7100	J01225560	Carbon Film RES	1/6W	56 ohm	PJ
D7009	G2015550	Diode	1S1555	R7101	J02225680	Carbon Film RES	1/6W	68 ohm	UJ
D7010	G2090027	Diode	1SS53	R7102	J01225681	Carbon Film RES	1/6W	680 ohm	PJ
D7011	G2060004	Diode	1SS270TJ	R7103	J01225680	Carbon Film RES	1/6W	56 ohm	PJ
D7012	G2090027	Diode	1SS53	R7104	J02225331	Carbon Film RES	1/6W	330 ohm	UJ
D7013	G2090027	Diode	1SS53	R7105	J02225104	Carbon Film RES	1/6W	100k ohm	UJ
D7014	G2090408	Diode	1SS270	R7107	J01225471	Carbon Film RES	1/6W	470 ohm	UJ
D7015	G2090408	Diode	1SS270	R7108	J02225221	Carbon Film RES	1/6W	220 ohm	UJ
D7016	G2090408	Diode	1SS270	R7109	J01225560	Carbon Film RES	1/6W	56 ohm	UJ
D7017	G2090408	Diode	1SS270	R7110	J02225680	RES Chip	1/10W	68 ohm	UJ
D7018	G2090408	Diode	1SS270	R7111	J01225472	Carbon Film RES	1/6W	47k ohm	PJ
D7019	G2060004	Diode	1SS270TJ	R7112	J01225102	Carbon Film RES	1/6W	1k ohm	PJ
D7019	G2060004	Diode	1SS270TJ	R7113	J24200111	RES Chip	1/10W	100 ohm	UJ
TH7001	G9090026	Theristor		VR7001	J51745101	POT	B	100 ohm	UJ
TH7002	G9090026	Theristor		VR7002	J51745102	POT	B	1k ohm	UJ
TH7003	G9090026	Theristor		VR7003	J51745101	POT	B	100 ohm	UJ
XF7001	H1102127	XTAL Filter	47L20A1	VR7004	J51745473	POT	B	47k ohm	UJ
XF7001	H1102127	XTAL Filter	47L20A1	VR7005	J51745473	POT	B	47k ohm	UJ
XF7001	H1102127	XTAL Filter	47L20A1	VR7006	J51745104	POT	B	100k ohm	UJ
R7008	J02225181	Carbon Film RES	1/6W 180 ohm	UJ					
R7009	J02225330	Carbon Film RES	1/6W 33 ohm	UJ					
R7010	J01225181	Carbon Film RES	1/6W 180 ohm	PJ	C7010	K12171102	Ceramic CAP	E	50WV 0.001uF
R7011	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7011	K12171102	Ceramic CAP	E	50WV 0.001uF
R7012	J02225680	Carbon Film RES	1/6W 68 ohm	UJ	C7012	K12171102	Ceramic CAP	E	50WV 0.001uF
R7013	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7013	K12171102	Ceramic CAP	E	50WV 0.001uF
R7014	J01225222	Carbon Film RES	1/6W 2.2k ohm	UJ	C7014	K12171102	Ceramic CAP	E	50WV 0.001uF
R7015	J01225222	Carbon Film RES	1/6W 2.2k ohm	PJ	C7015	K12171102	Ceramic CAP	E	50WV 0.001uF
R7016	J01225101	Carbon Film RES	1/6W 100 ohm	PJ	C7016	K12171102	Ceramic CAP	E	50WV 0.001uF
R7017	J01225101	Carbon Film RES	1/6W 100 ohm	PJ	C7017	K12171102	Ceramic CAP	E	50WV 0.001uF
R7018	J01225682	Carbon Film RES	1/6W 6.8k ohm	PJ	C7018	K12171102	Ceramic CAP	E	50WV 0.001uF
R7019	J01225223	Carbon Film RES	1/6W 22k ohm	PJ	C7019	K05175150	Ceramic CAP	RH	50WV 15pF
R7020	J02225101	Carbon Film RES	1/6W 220 ohm	UJ	C7020	K02172050	Ceramic CAP	CH	50WV 5pF
R7021	J01225223	Carbon Film RES	1/6W 22k ohm	UJ	C7021	K13175014	Ceramic CAP	E	50WV 0.0047uF
R7022	J02225682	Carbon Film RES	1/6W 6.8k ohm	UJ	C7022	K40129004	AL. Electro. CAP		16WV 10uF
R7023	J02225101	Carbon Film RES	1/6W 100 ohm	UJ	C7031	K13175014	Ceramic CAP	E	50WV 0.0047uF
R7024	J02225682	Carbon Film RES	1/6W 6.8k ohm	UJ	C7032	K12171102	Ceramic CAP	E	50WV 0.001uF
R7025	J02225331	Carbon Film RES	1/6W 33 ohm	UJ	C7033	K00175420	Ceramic CAP	SL	50WV 47pF
R7026	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7034	K12171102	Ceramic CAP	SL	50WV 10pF
R7027	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7035	K12171102	Ceramic CAP	E	50WV 0.001uF
R7028	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7036	K12171102	Ceramic CAP	E	50WV 0.001uF
R7029	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7037	K40109002	AL. Electro. CAP		10WV 47uF
R7030	J02225150	Carbon Film RES	1/6W 15 ohm	UJ	C7038	K22170805	CAP Chip	B	50WV 0.001uF
R7031	J02225391	Carbon Film RES	1/6W 390 ohm	UJ	C7040	K22170805	CAP Chip	B	50WV 0.001uF
R7041	J02225332	Carbon Film RES	1/6W 3.3k ohm	UJ	C7041	K40129004	AL. Electro. CAP		16WV 10uF
R7042	J02225101	Carbon Film RES	1/6W 100 ohm	UJ	C7042	K12171102	Ceramic CAP	E	50WV 0.001uF
R7043	J02225101	Carbon Film RES	1/6W 100 ohm	UJ	C7043	K40129004	AL. Electro. CAP		16WV 10uF
R7044	J02225682	Carbon Film RES	1/6W 6.8k ohm	UJ	C7044	K02179001	Ceramic CAP	CH	50WV 1pF
R7045	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7045	K12171102	Ceramic CAP	E	50WV 0.001uF
R7046	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7046	K12171102	Ceramic CAP	E	50WV 0.001uF
R7047	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7047	K12171102	Ceramic CAP	E	50WV 0.001uF
R7048	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7048	K12171102	Ceramic CAP	E	50WV 0.001uF
R7049	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7049	K12171102	Ceramic CAP	E	50WV 0.001uF
R7050	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7050	K12171102	Ceramic CAP	E	50WV 0.001uF
R7051	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7051	K12171102	Ceramic CAP	E	50WV 0.001uF
R7052	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7052	K12171102	Ceramic CAP	E	50WV 0.001uF
R7053	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7053	K12171102	Ceramic CAP	E	50WV 0.001uF
R7054	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7054	K12171102	Ceramic CAP	E	50WV 0.001uF
R7055	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7055	K12171102	Ceramic CAP	E	50WV 0.001uF
R7056	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7056	K12171102	Ceramic CAP	E	50WV 0.001uF
R7057	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7057	K12171102	Ceramic CAP	E	50WV 0.001uF
R7058	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7058	K12171102	Ceramic CAP	E	50WV 0.001uF
R7059	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7059	K12171102	Ceramic CAP	E	50WV 0.001uF
R7060	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7060	K12171102	Ceramic CAP	E	50WV 0.001uF
R7061	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7061	K12171102	Ceramic CAP	E	50WV 0.001uF
R7062	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7062	K12171102	Ceramic CAP	E	50WV 0.001uF
R7063	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7063	K12171102	Ceramic CAP	E	50WV 0.001uF
R7064	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7064	K12171102	Ceramic CAP	E	50WV 0.001uF
R7065	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7065	K12171102	Ceramic CAP	E	50WV 0.001uF
R7066	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7066	K12171102	Ceramic CAP	E	50WV 0.001uF
R7067	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7067	K12171102	Ceramic CAP	E	50WV 0.001uF
R7068	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7068	K12171102	Ceramic CAP	E	50WV 0.001uF
R7069	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7069	K12171102	Ceramic CAP	E	50WV 0.001uF
R7070	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7070	K12171102	Ceramic CAP	E	50WV 0.001uF
R7071	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7071	K12171102	Ceramic CAP	E	50WV 0.001uF
R7072	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7072	K12171102	Ceramic CAP	E	50WV 0.001uF
R7073	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7073	K12171102	Ceramic CAP	E	50WV 0.001uF
R7074	J01225101	Carbon Film RES	1/6W 100 ohm	UJ	C7074	K12171102	Ceramic CAP	E	50WV 0.001uF

PARTS LIST

C7072	K00173070	Ceramic CAP.	SL	50WV	7pF	T7022	L0021165	Coil	
C7073	K13179008	Ceramic CAP.	F	50WV	0.01uF	T7023	L0021736	Coil	
C7074	K13179008	Ceramic CAP.	F	50WV	0.01uF	T7024	L0021736	Coil	
C7075	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7076	K40129004	AL Electro. CAP.		16WV	10uF	L7006	L1190242	M RFC	0.47uH
C7077	K05172060	Ceramic CAP.	RH	50WV	6pF	L7007	L1190254	V RFC	0.47uH
C7078	K05172060	Ceramic CAP.	RH	50WV	3pF	L7008	L1190254	V RFC	0.47uH
C7080	K13179008	Ceramic CAP.	F	50WV	0.01uF	L7009	L1190242	M RFC	0.47uH
C7081	K13179008	Ceramic CAP.	F	50WV	0.01uF	L7012	L1190254	V RFC	4.7uH
C7082	K13179008	Ceramic CAP.	F	50WV	0.01uF	L7013	L1190250	M RFC	2.2uH
C7083	K13179008	Ceramic CAP.	F	50WV	0.01uF	L7014	L1190250	M RFC	2.2uH
C7084	K12171102	Ceramic CAP.	E	50WV	0.001uF	L7015	L1190250	M RFC	100uH
C7085	K05172060	Ceramic CAP.	RH	50WV	8pF	L7016	L1190252	V RFC	3.3uH
C7086	K00172000	Ceramic CAP.	SL	50WV	5pF	L7017	L1190256	Coil	
C7088	K00175470	Ceramic CAP.	SL	50WV	47pF	L7018	L1190259	Coil	
C7089	K12171102	Ceramic CAP.	E	50WV	0.001uF	L7019	L1190254	Coil	
C7090	K00175470	Ceramic CAP.	SL	50WV	47pF	L7021	L1190252	Coil	
C7091	K40129004	AL Electro. CAP.		16WV	10uF	L7022	L1190246	M RFC	1uH
						L7025	L1190270	M RFC	100uH
C7092	K12171102	Ceramic CAP.	E	50WV	0.001uF	L7027	L1190244	V RFC	0.47uH
C7094	K05172060	Ceramic CAP.	RH	50WV	15pF	L7028	L1190259	M RFC	3.3uH
C7095	K12171102	Ceramic CAP.	E	50WV	0.001uF	L7029	L1190246	M RFC	1uH
C7096	K40129004	AL Electro. CAP.		16WV	10uF				
C7097	K12171102	Ceramic CAP.	E	50WV	0.001uF	CV7001	L4020086	Heater Resistor	
C7098	K05172060	Ceramic CAP.	RH	50WV	5pF	CV7002	L4020087	Heater Resistor	
C7099	K40129004	AL Electro. CAP.		16WV	10uF	CV7003	L4020087	Heater Resistor	
						CV7004	L4020081	Heater Resistor	
C7100	K12171102	Ceramic CAP.	E	50WV	0.001uF	FB7003	L9190001	Ferrite Beards	
C7101	K12171102	Ceramic CAP.	E	50WV	0.001uF	FB7004	L9190001	Ferrite Beards	
C7102	K40129004	AL Electro. CAP.		16WV	10uF	J7001	P0090527	Connector	
C7103	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7002	P0090527	Connector	
C7104	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7003	P0090527	Connector	
C7105	K40129004	AL Electro. CAP.		16WV	10uF	J7004	P0090527	Connector	
C7106	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7005	P0090527	Connector	
C7107	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7006	P0090527	Connector	
C7108	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7007	P0090527	Connector	
C7109	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7008	P0090527	Connector	
C7110	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7009	P0090527	Connector	
C7111	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7010	P0090527	Connector	
C7112	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7011	P0090527	Connector	
C7113	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7012	P0090527	Connector	
C7114	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7013	P0090527	Connector	
C7115	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7014	P0090527	Connector	
C7116	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7015	P0090527	Connector	
C7117	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7016	P0090527	Connector	
C7118	K13179008	Ceramic CAP.	F	50WV	0.01uF	J7017	P0090527	Connector	
C7119	K13179008	Ceramic CAP.	F	50WV	0.01uF	TP7001	Q5000036	TP G	NA 1095
C7120	K13179008	Ceramic CAP.	F	50WV	0.01uF			Spring Board	
C7121	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7122	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7123	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7124	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7125	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7126	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7127	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7128	K40129004	AL Electro. CAP.		16WV	10uF				
C7129	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7130	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7131	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7132	K00172020	Ceramic CAP.	SL	50WV	3pF				
C7133	K13179008	Ceramic CAP.	F	50WV	0.01uF				
C7134	K12171102	Ceramic CAP.	E	50WV	0.001uF				
C7135	K12171102	Ceramic CAP.	E	50WV	0.001uF				
C7136	K12171102	Ceramic CAP.	E	50WV	0.001uF				
C7137	K12171102	Ceramic CAP.	E	50WV	0.001uF				
C7138	K12171102	Ceramic CAP.	E	50WV	0.001uF				
C7139	K12171102	Ceramic CAP.	E	50WV	0.001uF				
C7140	K12171102	Ceramic CAP.	E	50WV	0.001uF				
C7141	K12171102	Ceramic CAP.	E	50WV	0.001uF				
C7142	K12171102	Ceramic CAP.	E	50WV	0.001uF				
C7143	K12171102	Ceramic CAP.	E	50WV	0.001uF				
C7144	K05172060	Ceramic CAP.	RH	50WV	15pF				
C7145	K05172060	Ceramic CAP.	RH	50WV	10pF				
C7146	K05172060	CAP. Chip	B	50WV	0.001uF				
C7147	K22170805	CAP. Chip	B	50WV	0.001uF				
C7148	K22170235	CAP. Chip	CH	50WV	0.001uF				
C7149	K22170235	CAP. Chip	CH	50WV	0.001uF				
C7150	K22170235	CAP. Chip	CH	50WV	0.001uF				
C7151	K22170235	CAP. Chip	CH	50WV	0.001uF				
C7152	K22170235	CAP. Chip	CH	50WV	0.001uF				
C7153	K22170235	CAP. Chip	B	50WV	0.001uF				
C7154	K22170235	Ceramic CAP.	F	50WV	0.001uF				
C7155	K2944021	Ceramic CAP.		25WV	0.047uF				
IC7002	K91000050	Variable CAP		4pF					
IC7003	K91000050	Variable CAP		10pF					
T7006	L0021738	Coil							
T7007	L0021736	Coil							
T7008	L0021736	Coil							
T7009	L0021740	Coil							
T7010	L0021740	Coil							
T7011	L0021718	Coil							
T7012	L0021718	Coil							
T7019	L0021740	Coil							
T7020	L0021740	Coil							
T7021	L0021740	Coil							

PARTS LIST

L7401	L1190242	M.RFC	0.47uH	C7706	K22170319	CAP. Chip	CJ	50WV	22pF
L7402	L1190242	M.RFC	0.47uH	C7707	K22170319	CAP. Chip	B	50WV	0.0047uF
L7403	L1190242	M.RFC	0.47uH	C7708	K22170319	AL. Electro	F	10WV	100uF
L7404	L0021520	Coil				CAP.			
L7405	L1190242	M.RFC	0.47uH	C7709	K22170813	CAP. Chip	B	50WV	0.0047uF
FR7401	L990001	Ferrite Beads		C7710	K22170813	CAP. Chip	CH	50WV	1pF
FR7402	L990001	Ferrite Beads		C7711	K22170813	CAP. Chip	F	50WV	0.01uF
TP7401	Q5000036	TP C	MA 095	C7712	K4010415	AL. Electro	F	10WV	100uF
TP7402	Q5000036	TP C	MA 095	C7713	K22170813	CAP. Chip	B	50WV	0.0047uF
TP7403	Q5000036	TP C	MA 095	C7714	K22170813	CAP. Chip	H	50WV	0.0047uF
				C7715	K22170813	CAP. Chip	F	50WV	0.01uF
	R0062770B	VCO Case A		C7716	K22141809	CAP. Chip	B	25WV	0.1uF
	R0062770B	VCO Case A		C7717	K22170813	CAP. Chip	B	50WV	0.0047uF
	R0062770B	VCO Case A		C7718	K22170813	CAP. Chip	B	50WV	0.0047uF
	R0062770B	VCO Case A		C7719	K22170813	CAP. Chip	F	50WV	0.0047uF
	R0062770B	VCO Case A		C7720	K22170813	CAP. Chip	F	50WV	0.01uF
				C7721	K78120009	Tantalum CAP.		16WV	1uF
						Chip			
				C7722	K22170813	CAP. Chip		25WV	0.01uF
				C7723	K22170813	CAP. Chip			
				C7724	K22142539	CAP. Chip	B	25WV	0.1uF
				C7725	K91000114	Variable CAP.		6pF	
				T7701	L002135x	Coil			
				L7702	L1190348	M.RFC			
					Q5000036	Lead Frame			
	</								

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PARTS LIST

C8060	R12171102	Ceramic CAP.	E	50WV	0.001uF				
C8061	K41171104	Ceramic CAP.	F	50WV	0.001uF				
C8062	K41171105	Ceramic CAP.	F	50WV	0.001uF				
C8063	K41171106	Ceramic CAP.	F	50WV	0.001uF				
C8064	K41171107	Ceramic CAP.	F	50WV	0.001uF				
C8065	K41171108	Ceramic CAP.	F	50WV	0.001uF				
C8066	K05172030	Ceramic CAP.	Rh	50WV	0.001uF				
C8067	K12172002	Ceramic CAP.	Rh	50WV	0.001uF				
C8068	K41171109	Ceramic CAP.	F	50WV	0.001uF				
C8069	K41171110	Ceramic CAP.	F	50WV	0.001uF				
C8070	K41171111	Ceramic CAP.	F	50WV	0.001uF				
C8071	K41171112	Ceramic CAP.	F	50WV	0.001uF				
C8072	K41171113	Ceramic CAP.	F	50WV	0.001uF				
C8073	K41171114	Ceramic CAP.	F	50WV	0.001uF				
C8074	K41171115	Ceramic CAP.	F	50WV	0.001uF				
C8075	K41171116	Ceramic CAP.	F	50WV	0.001uF				
C8076	K41171117	Ceramic CAP.	F	50WV	0.001uF				
C8077	K41171118	Ceramic CAP.	F	50WV	0.001uF				
C8078	K41171119	Ceramic CAP.	F	50WV	0.001uF				
C8079	K41171120	Ceramic CAP.	F	50WV	0.001uF				
C8080	K22171229	CAP. Chip	CH	50WV	56pF				
C8081	K22171229	CAP. Chip	CH	50WV	56pF				
C8082	K22171229	CAP. Chip	CH	50WV	56pF				
C8083	K22171229	CAP. Chip	CH	50WV	56pF				
C8084	K22171229	CAP. Chip	CH	50WV	56pF				
C8085	K22171229	CAP. Chip	CH	50WV	56pF				
C8086	K22171229	CAP. Chip	CH	50WV	56pF				
C8087	K22171229	CAP. Chip	CH	50WV	56pF				
C8088	K22171229	CAP. Chip	CH	50WV	56pF				
C8089	K22171229	CAP. Chip	CH	50WV	56pF				
C8090	K22171229	CAP. Chip	CH	50WV	56pF				
C8091	K22171229	CAP. Chip	CH	50WV	56pF				
C8092	K22171229	CAP. Chip	CH	50WV	56pF				
T8001	L0021358	Coil							
T8002	L0021359	Coil							
L8001	L0121358	Coil							
L8002	L0121359	Coil							
L8003	L0121360	Coil							
L8004	L0121361	Coil							
L8005	L0121362	Coil							
L8006	L0121363	Coil							
L8007	L0121364	Coil							
L8008	L0121365	Coil							
L8009	L0121366	Coil							
L8010	L0121367	Coil							
L8011	L0121368	Coil							
L8012	L0121369	Coil							
L8013	L0121370	Coil							
L8014	L0121371	Coil							
L8015	L0121372	Coil							
L8016	L0121373	Coil							
L8017	L0121374	Coil							
L8018	L0121375	Coil							
L8019	L0121376	Coil							
CV8001	L4020086	Helical Resonator							
FB8001	L9100001	Ferrite Beads							
FB8002	L9100002	Ferrite Beads							
J8001	P1090210	Connector							
J8002	P0090532	Connector							
J8003	P0090530	Connector							
TP8001	Q5000036	TP-G	MK-1095						
R0122640	Shield Plate								
R0123550	Leaf Spring								
R0121430	Leaf Spring								
R0121340	Leaf Spring								
R006177 B	VCO Case A								
R0061780A	VCO Case Lid								
R0061774C	PLL IF Shield								
R0510870B	Shield Case								
430MHz SHIFT UNIT									
Syn. No.	Part No.	Description							
	F2892108	Printed Circuit Board							
	C028928AA	PCB with Components							
T8001	L0021358	Coil							
T8002	L0021359	Coil							
L8001	L0121358	Coil							
L8002	L0121359	Coil							
L8003	L0121360	Coil							
L8004	L0121361	Coil							
L8005	L0121362	Coil							
L8006	L0121363	Coil							
L8007	L0121364	Coil							
L8008	L0121365	Coil							
L8009	L0121366	Coil							
L8010	L0121367	Coil							
L8011	L0121368	Coil							
L8012	L0121369	Coil							
L8013	L0121370	Coil							
L8014	L0121371	Coil							
L8015	L0121372	Coil							
L8016	L0121373	Coil							
L8017	L0121374	Coil							
L8018	L0121375	Coil							
L8019	L0121376	Coil							
CV8001	L4020081	Helical Resonator							
J8001	P1090210	Connector							
J8002	P0090532	Connector							
J8003	P1090210	Connector							
Q5000016	TP-F	MS-60124							
R0110610	Spring Board								
R0123610	Shield Case								

PARTS LIST

R0123630		Shield Cover		S8500138		Beads		(25W Model)	
R0123630		PLL IF Shield Lid							
430MHz PA UNIT				CNTL UNIT					
F2887105 Printed Circuit Board				F2891000B Printed Circuit Board					
C028875AA PCB with Components: 10W Model				C028910AA PCB with Components (w/o BURST Tone)					
C028875AB PCB with Components: 25W Model				C028910AB PCB with Components* (w/1750Hz BURST Tone)					
				C028910AC PCB with Components* w/1800Hz BURST Tone					
Q7501(1W)	G1090858	IC	M57716	Q1001	G340664C	Transistor	2SD667C		
Q7501(25W)	G1090796	IC	M57745	Q1002	C100004R	Transistor	2SC344R		
D7501	G2090077	Diode	MI308	Q1003	G100004R	IC	2SC344R		
D7502	G2090077	Diode	MI308	Q1004	C100004R	Transistor	2SC344R		
D7503	G2090377	Diode	MI308	Q1005	C100004R	Transistor	2SC344R		
D7504	G2090118	Diode	1SS97	Q1006	G3304580C	Transistor	2SC458C		
D7505	G2090118	Diode	1SS97	Q1007	C100004R	IC	2SC344R		
D7506(25W)	G2090377	Diode	MI308	Q1008	C100004R	IC	2SC344R		
R7501	J31309002	RES.	1W 0.1 ohm	Q1009	C100004R	IC	2SC344R		
R7502(25W)	J31309002	RES.	1W 0.1 ohm	Q1010	C100004R	IC	2SC344R		
R7503	J01275151	Carbon Film RES.	1/2W 150 ohm	Q1011	C100004R	IC	2SC344R		
R7504	J01275151	Carbon Film RES.	1/2W 150 ohm	Q1012	C100004R	IC	2SC344R		
R7505	J01275151	Carbon Film RES.	1/2W 150 ohm	Q1013	C100004R	IC	2SC344R		
R7506(10W)	J01275151	Carbon Film RES.	1/2W 150 ohm	Q1014	C100004R	IC	2SC344R		
R7507(10W)	J01275151	Carbon Film RES.	1/2W 150 ohm	Q1015	C100004R	IC	2SC344R		
R7508(10W)	J01275151	Carbon Film RES.	1/2W 150 ohm	Q1016	C100004R	IC	2SC344R		
C7501	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1017	C100004R	IC	2SC344R		
C7502	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1018	C100004R	IC	2SC344R		
C7503	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1019	C100004R	IC	2SC344R		
C7504	K40119004	Al Electro CAP.	16WV 10uF	Q1020	C100004R	IC	2SC344R		
C7505	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1021	G1090257	IC	MC14066BCP		
C7506	K13179008	Ceramic CAP.	F 5WV 0.001uF	Q1022	C100004R	IC	2SC344R		
C7507	K40119004	Al Electro CAP.	16WV 10uF	Q1023	C100004R	IC	2SC344R		
C7508	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1024	C100004R	IC	2SC344R		
C7509	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1025	G1090794	IC	HD63A2IP		
C7510	K40119004	Al Electro CAP.	16WV 10uF	Q1026	C100004R	IC	2SC344R		
C7511	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1027	C100004R	IC	2SC344R		
C7512	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1028	C100004R	IC	2SC344R		
C7513	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1029	C100004R	IC	2SC344R		
C7514	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1030	C100004R	IC	2SC344R		
C7515(10W)	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1031	C100004R	IC	2SC344R		
C7516(15W)	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1032	G3090079	Transistor	BA1A4P		
C7517	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1033	C100004R	IC	2SC344R		
C7518	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1034	C100004R	IC	2SC344R		
C7519	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1035	C100004R	IC	2SC344R		
C7520	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1036	C100004R	IC	2SC344R		
C7521	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1037	C100004R	IC	2SC344R		
C7522	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1038	C100004R	IC	2SC344R		
C7523	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1039	C100004R	IC	2SC344R		
C7524(10W)	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1040	C100004R	IC	2SC344R		
C7525	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1041	C100004R	IC	2SC344R		
C7526	K02113060	Ceramic CAP.	CH 50WV 5pF	Q1042	C100004R	IC	2SC344R		
C7527	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1043	G3090079	Transistor	BA1A4P		
C7528	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1044	C100004R	IC	2SC344R		
C7529	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1045	C100004R	IC	2SC344R		
C7530	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1046	C100004R	IC	2SC344R		
C7531	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1047	C100004R	IC	2SC344R		
C7532	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1048	G3090081	Transistor	BA1A4M		
C7533	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1049	C100004R	IC	2SC344R		
C7534	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1050	C100004R	IC	2SC344R		
C7535	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1051	G3090082	Transistor	BA1A4L		
C7536	K10176102	Ceramic CAP.	B 50WV 0.001uF	Q1052**	G3304580C	Transistor	2SC458C		
L7501	L1020469	RFC		D1001	G2050338	Diode	1SS81		
L7502	L1020469	RFC		D1002	C100004R	IC	HZ7C		
L7503	L1020663	RFC		D1003	G100004R	IC	10F1		
L7504	L0017840	Coil		D1004	G100004R	IC	HZ12B2		
L7505	L0017840	Coil		D1005	G100004R	IC	1SS270		
L7506	L0017840	Coil		D1006	G100004R	IC	1SS270		
L7507	L0017840	Coil		D1007	G100004R	IC	1SS270		
L7508	L0017840	Coil		D1008	G100004R	IC	1SS270		
L7509	L0020840	Coil		D1009	G100004R	IC	1SS270		
L7510	L119146	V RFC	1uH	D1010	G2090408	Diode	1SS270		
L7511	L119146	V RFC	1uH	D1011	C100004R	IC	1SS270		
Q5000036	TP G	MK 1095		D1012**	G2090408	Diode	1SS270		
Q6000001	Terminal Strip	(10W Model)		D1013	G2090385	Diode	HZ33-1		
R6047250	Booster Spacer			D1014	G2090385	Diode	HZ9C2		
				D1015**	C100004R	IC	1SS270		
				D1016	G2050408	Diode	1SS270		

PARTS LIST

T1001	L3038.25	Trans	MPS 182	C2002	K191490.2	Ceramic CAP	E	50WV	0.001uF
B71001	M4290004A	Buzzer	PZS 22K	C2003	K191490.3	Ceramic CAP	E	50WV	0.001uF
S1001	N5090051	Slide Switch	SSS 210279	C2004	K191490.4	Ceramic CAP	E	50WV	0.001uF
S1002	N5090051	Slide Switch	SSS 210279	C2005	K191490.474	Tantalum CAP.		35WV	0.47uF
J1001	P0090527	Connector		S2001	N5090028	Tact Switch			
J1002	P0090527	Connector		S2002	N5090028	Tact Switch			
J1003	P0090527	Connector		S2003	N5090028	Tact Switch			
J1004	P0090527	Connector		S2004	N5090028	Tact Switch			
J1005	P0090527	Connector		S2005	N5090028	Tact Switch			
J1006	P0090527	Connector		S2006	N5090028	Tact Switch			
J1007	P0090527	Connector		S2007	N5090028	Tact Switch			
J1008	P0090527	Connector		S2008	N5090028	Tact Switch			
J1009	P0090527	Connector		S2009	N5090028	Tact Switch			
J1010	P0090527	Connector		S2010	N5090028	Tact Switch			
J1011	P0090527	Connector		S2011	N5090028	Tact Switch			
J1012	P0090527	Connector		S2012	N5090028	Tact Switch			
J1013	P0090527	Connector		S2013	N5090028	Tact Switch			
J1014	P0090527	Connector		S2014	N5090028	Tact Switch			
J1015	P0090527	Connector		S2015	N5090028	Tact Switch			
J1016	P0090527	Connector		S2016	N5090028	Tact Switch			
J1017	P0090527	Connector		S2017	N5090028	Tact Switch			
J1018	P0090527	Connector		S2018	N5090028	Tact Switch			
J1019	P0090527	Connector		S2019	N5090028	Tact Switch			
J1020	P0090527	Connector		S2020	N5090028	Tact Switch			
AT1001	Q90.6385	Lithium Battery	CR2032	S2021	N5090028	Tact Switch			
	R0102810	AF decoupling		S2022	N5090028	Tact Switch			
	R0102810	Nut Board		S2023	N5090028	Tact Switch			
	R7118700	Fiber		S2024	N5090028	Tact Switch			
				S2025	N5090028	Tact Switch			
				S2026	N5090028	Tact Switch			
				S2027	N5090028	Tact Switch			
				S2028	N5090028	Tact Switch			
				S2029	N5090028	Tact Switch			
				S2030	N5090028	Tact Switch			
				S2031	N5090028	Tact Switch			
				S2032	N5090028	Tact Switch			
				S2033	N5090028	Tact Switch			
				S2034	N5090028	Tact Switch			
				S2035	N5090028	Tact Switch			
				S2036	N5090028	Tact Switch			
				S2037	N5090028	Tact Switch			
				S2038	N5090028	Tact Switch			
				S2039	N5090028	Tact Switch			
				S2040	N5090028	Tact Switch			
				S2041	N5090028	Tact Switch			
				S2042	N5090028	Tact Switch			
				S2043	N5090028	Tact Switch			
				S2044	N5090028	Tact Switch			
				S2045	N5090028	Tact Switch			
				S2046	N5090028	Tact Switch			
				S2047	N5090028	Tact Switch			
				S2048	N5090028	Tact Switch			
				S2049	N5090028	Tact Switch			
				S2050	N5090028	Tact Switch			
				S2051	N5090028	Tact Switch			
				S2052	N5090028	Tact Switch			
				S2053	N5090028	Tact Switch			
				S2054	N5090028	Tact Switch			
				S2055	N5090028	Tact Switch			
				S2056	N5090028	Tact Switch			
				S2057	N5090028	Tact Switch			
				S2058	N5090028	Tact Switch			
				S2059	N5090028	Tact Switch			
				S2060	N5090028	Tact Switch			
				S2061	N5090028	Tact Switch			
				S2062	N5090028	Tact Switch			
				S2063	N5090028	Tact Switch			
				S2064	N5090028	Tact Switch			
				S2065	N5090028	Tact Switch			
				S2066	N5090028	Tact Switch			
				S2067	N5090028	Tact Switch			
				S2068	N5090028	Tact Switch			
				S2069	N5090028	Tact Switch			
				S2070	N5090028	Tact Switch			
				S2071	N5090028	Tact Switch			
				S2072	N5090028	Tact Switch			
				S2073	N5090028	Tact Switch			
				S2074	N5090028	Tact Switch			
				S2075	N5090028	Tact Switch			
				S2076	N5090028	Tact Switch			
				S2077	N5090028	Tact Switch			
				S2078	N5090028	Tact Switch			
				S2079	N5090028	Tact Switch			
				S2080	N5090028	Tact Switch			
				S2081	N5090028	Tact Switch			
				S2082	N5090028	Tact Switch			
				S2083	N5090028	Tact Switch			
				S2084	N5090028	Tact Switch			
				S2085	N5090028	Tact Switch			
				S2086	N5090028	Tact Switch			
				S2087	N5090028	Tact Switch			
				S2088	N5090028	Tact Switch			
				S2089	N5090028	Tact Switch			
				S2090	N5090028	Tact Switch			
				S2091	N5090028	Tact Switch			
				S2092	N5090028	Tact Switch			
				S2093	N5090028	Tact Switch			
				S2094	N5090028	Tact Switch			
				S2095	N5090028	Tact Switch			
				S2096	N5090028	Tact Switch			
				S2097	N5090028	Tact Switch			
				S2098	N5090028	Tact Switch			
				S2099	N5090028	Tact Switch			
				S2100	N5090028	Tact Switch			
				S2101	N5090028	Tact Switch			
				S2102	N5090028	Tact Switch			
				S2103	N5090028	Tact Switch			
				S2104	N5090028	Tact Switch			
				S2105	N5090028	Tact Switch			
				S2106	N5090028	Tact Switch			
				S2107	N5090028	Tact Switch			
				S2108	N5090028	Tact Switch			
				S2109	N5090028	Tact Switch			
				S2110	N5090028	Tact Switch			
				S2111	N5090028	Tact Switch			
				S2112	N5090028	Tact Switch			
				S2113	N5090028	Tact Switch			
				S2114	N5090028	Tact Switch			
				S2115	N5090028	Tact Switch			
				S2116	N5090028	Tact Switch			
				S2117	N5090028	Tact Switch			
				S2118	N5090028	Tact Switch			
				S2119	N5090028	Tact Switch			
				S2120	N5090028	Tact Switch			
				S2121	N5090028	Tact Switch			
				S2122	N5090028	Tact Switch			
				S2123	N5090028	Tact Switch			
				S2124	N5090028	Tact Switch			
				S2125	N5090028	Tact Switch			
				S2126	N5090028	Tact Switch			
				S2127	N5090028	Tact Switch			
				S2128	N5090028	Tact Switch			
				S2129	N5090028	Tact Switch			
				S2130	N5090028	Tact Switch			
				S2131	N5090028	Tact Switch			
				S2132	N5090028	Tact Switch			
				S2133	N5090028	Tact Switch			
				S2134	N5090028	Tact Switch			
				S2135	N5090028	Tact Switch			
				S2136	N5090028	Tact Switch			
				S2137	N5090028	Tact Switch			
				S2138	N5090028	Tact Switch			
				S2139	N5090028	Tact Switch			
				S2140	N5090028	Tact Switch			
				S2141	N5090028	Tact Switch			
				S2142	N5090028	Tact Switch			
				S2143	N5090028	Tact Switch			
				S2144	N5090028	Tact Switch			
				S2145	N5090028	Tact Switch			
				S2146	N5090028	Tact Switch			
				S2147	N5090028	Tact Switch			
				S2148	N5090028	Tact Switch			
				S2149	N5090028	Tact Switch			
				S2150	N5090028	Tact Switch			
				S2151	N5090028	Tact Switch			
				S2152	N5090028	Tact Switch			
				S2153	N5090028	Tact Switch			
				S2154	N5090028	Tact Switch			
				S2155	N5090028	Tact Switch			
				S2156	N5090028	Tact Switch			
				S2157	N5090028	Tact Switch			
				S2158	N5090028	Tact Switch			
				S2159	N5090028	Tact Switch			
				S2160	N5090028	Tact Switch			
				S2161	N5090028	Tact Switch			
				S2162	N5090028	Tact Switch			
				S2163	N5090028	Tact Switch			
				S2164	N5090028	Tact Switch			
				S2165	N5090028	Tact Switch			
				S2166	N5090028	Tact Switch			
				S2167	N5090028	Tact Switch			
				S2168	N5090028	Tact Switch			
				S2169	N5090028	Tact Switch			
				S2170	N5090028	Tact Switch			
				S2171	N5090028	Tact Switch			
				S2172	N5090028	Tact Switch			
				S2173	N5090028	Tact Switch			
				S2174	N5090028	Tact Switch			
				S2175	N5090028	Tact Switch			
				S2176	N5090028	Tact Switch			
				S2177	N5090028	Tact Switch			
				S2178	N5090028	Tact Switch			
				S2179	N5090028	Tact Switch			
				S2180	N5090028	Tact Switch			
				S2181	N5090028	Tact Switch			
				S2182	N5090028	Tact Switch			
				S2183	N5090028	Tact Switch			
				S2184	N5090028	Tact Switch			
				S2185	N5090028	Tact Switch			
				S2186	N5090028	Tact Switch			
				S2187	N5090028	Tact Switch			
				S2188	N5090028	Tact Switch			
				S2189	N5090028	Tact Switch			
				S2190	N5090028	Tact Switch			
				S2191	N5090028	Tact Switch			
				S2192	N5090028	Tact Switch			
				S2193	N5090028	Tact Switch			
				S2194	N5090028	Tact			

PARTS LIST

D701	G2090232	Diode	511B			
ZNR701	Q9000381	Surge Absorber	ERZ C10DK471			
ZNR702	Q9000382	Surge Absorber	ERZ C10DK681			
ZNR703	Q9000382	Surge Absorber	ERZ C10DK681			
F701	Q0000027	Miniature Fuse	MF51	5A		
F702	Q0000027	Miniature Fuse	MF51	5A		
	P2000024	Fuse Holder				
VR-A UNIT						
Symbol No.	Part No.	Description	Device			
	F2890104A	Printed Circuit Board				
	C028904AA	PCB with Components				
R402	J01225103	Carbon Film RES.	1/6W	10K ohm	PJ	
R403	J01245103	Carbon Film RES.	1/4W	10K ohm	SJ	
R404	J02245101	Carbon Film RES.	1/4W	100 ohm	SJ	
R405	J02245101	Carbon Film RES.	1/4W	100 ohm	SJ	
VR401	J62800100	Potentiometer (AF/RF)	10KA/10KC			
VR402	J63800008	Potentiometer (SQL/TONE)	50KB, 10KB/10KB			
VR403	J63800007	Potentiometer (MIC/DRIVE)	10KA/50KB, 10KB			
J401	P0090524	Connector				
J402	P0090525	Connector				
J403	P0090525	Connector				
J404	P0090526	Connector				
J405	P0090529	Connector				
J406	P0090524	Connector				
J407	P0090524	Connector				
J408	P0090524	Connector				
J409	P0090522	Connector				
J410	P0090524	Connector				
VR-B UNIT						
Symbol No.	Part No.	Description	Device			
	F2890105A	Printed Circuit Board				
	C028905AA	PCB with Components				
R501	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ	
VR501	J60800133	Potentiometer (MONITOR)	50KB			
C501	K70167334	Tantalum CAP.	35WV	0.33uF		
C502	K19149021	Ceramic CAP.	25WV	0.047uF		
C503	K19149023	Ceramic CAP.	25WV	0.1uF		
L501	L1190115	Coil	150mH			
VR-C UNIT						
Symbol No.	Part No.	Description	Device			
	F2890106A	Printed Circuit Board				
	C028906AA	PCB with Components				
D201	G2090379	Diode	1SS119			
R201	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ	
VR201	J60800134	Potentiometer (VOX GAIN)	10KA			
VR202	J60800136	Potentiometer (VOX DELAY)	500KA			
VR203	J60800135	Potentiometer (VOX ANTI-TRIP)	10KB			
VR204	J60800137	Potentiometer (KEYER SPEED)	500KC			
S201	N0190144	Rotary Switch (AGC)				
S202	N0190142	Rotary Switch (SAT)				
J201	P0090528	Connector				
J202	P0090524	Connector				
J203	P0090526	Connector				
J204	P0090525	Connector				
J205	P0090528	Connector				
VR-D UNIT						
Symbol No.	Part No.	Description	Device			
	F2890109	Printed Circuit Board				
	C028909AA	PCB with Components				
R901	J07225222	Carbon Film RES.	1/6W	2.2k ohm	PJ	
VR901	J62800101	Potentiometer (SHIFT/NOTCH)	10KB/10KB			
J901	P0090524	Connector				
J902	P0090525	Connector				
SW-A UNIT						
Symbol No.	Part No.	Description	Device			
	F2890101	Printed Circuit Board				
	C028901AA	PCB with Components				
D301	G2090408	Diode	1SS270			
R301	J02245330	Carbon Film RES.	1/4W	33 ohm	SJ	
S301	N4090109	Push Switch				
J301	P0090525	Connector				
J302	P0090524	Connector				
J303	P0090529	Connector				
TP301	Q5000036	TP-G	MK-1095			
TP302	Q5000036	TP-G	MK-1095			
SW-B UNIT						
Symbol No.	Part No.	Description	Device			
	F2890102	Printed Circuit Board				
	C028902AA	PCB with Components				
D601	G2090269	LED	SR 538D			
D602	G2090268	LED	SY 438D			
D603	G2090268	LED	SY 438D			
D604	G2090267	LED	SC 238D			
D605	G2090267	LED	SC 238D			
R601	J02225122	Carbon Film RES.	1/6W	1.2k ohm	UJ	
R602	J02225122	Carbon Film RES.	1/6W	1.2k ohm	UJ	
R603	J02225122	Carbon Film RES.	1/6W	1.2k ohm	UJ	
R604	J02225122	Carbon Film RES.	1/6W	1.2k ohm	UJ	
R605	J02225122	Carbon Film RES.	1/6W	1.2k ohm	UJ	
R606	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ	
S601	N4090103	Push Switch				
SW-C UNIT						
Symbol No.	Part No.	Description	Device			
	F2890103	Printed Circuit Board				
	C028903AA	PCB with Components				
Q101	G3107331Q	Transistor	2SA733AQ			
R101	J02225474	Carbon Film RES.	1/6W	470k ohm	UJ	
S101	N4090104	Push Switch				
S102	N0190137	Rotary Switch				
J101	P0090525	Connector				
J102	P0090527	Connector				

PARTS LIST

ENCODER UNIT			
Qty	Do. No.	Description	Device
	F2890107	Printed Circuit Board	
	C028907AA	PCB with Components	
S551	Q9000388	Rotary Code Switch	
J551	P0090525	Connector	

MODEL CHART

Symbol No	Part No.	Description	Device	MODEL												
				A1	A2	B1	B2	B3	C1	C2	C3	H1	H2	H3	F	
144MHz MAIN UNIT	D6025	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D6026	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D6027	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D6030	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D6011	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D8004	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D8005	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D8006	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D8007	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D8008	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
430MHz PLL UNIT	D8010	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D8011	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o

MODEL	FREQUENCY RANGE		PRESET FREQUENCY		PRESET REPEATER SHIFT			TONE BURST
	2m BAND	70cm BAND	2m BAND	70cm BAND	2m BAND	70cm BAND		
A1	144 - 146 MHz	430 - 450 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz		1800 Hz
A2	144 - 154 MHz	430 - 450 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz		1800 Hz
B1	144 - 146 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	7.6 MHz		1750 Hz
B2	144 - 148 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz		1750 Hz
B3	144 - 154 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	7.6 MHz		1750 Hz
C1	144 - 146 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	1.6 MHz		1750 Hz
C2	144 - 148 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	1.6 MHz		1750 Hz
C3	144 - 154 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	1.6 MHz		1750 Hz
H1	144 - 146 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz		1750 Hz
H2	144 - 148 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz		1750 Hz
H3	144 - 154 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz		1750 Hz
F	144 - 146 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz		1750 Hz

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[illegible]

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				50MHz PA UNIT				
				Part No	Device			
C2052	K05173100	Ceramic CAP	F	50WV	0.01uF	F2899000	Part No	Device
C2053	K05173100	Ceramic CAP	F	50WV	0.01uF	F2899000	Part No	Device
C2054	K05173100	Ceramic CAP	F	50WV	0.01uF	F2899000	Part No	Device
C2055	K05173100	Ceramic CAP	F	50WV	0.01uF	F2899000	Part No	Device
C2056	K05175270	Ceramic CAP	RH	50WV	0.01uF	F2899000	Part No	Device
C2057	K40129004	Al. Electro CAP		16WV	10uF	Q3001	Q3001	IC
C2058	K13179008	Ceramic CAP	F	50WV	0.01uF	D3001	D3001	Diode
C2059	K40129004	Al. Electro CAP		16WV	10uF	F3001	F3001	Fuse
C2060	K13179008	Ceramic CAP	F	50WV	0.01uF	G3001	G3001	Transistor
C2061	K13179008	Ceramic CAP	SI	50WV	0.01uF	H3001	H3001	Transistor
C2062	K13179008	Ceramic CAP	F	50WV	0.01uF	I3001	I3001	Transistor
C2063	K40129004	Al. Electro CAP		16WV	10uF	J3001	J3001	Transistor
C2064	K13179008	Ceramic CAP	F	50WV	0.01uF	K3001	K3001	Transistor
C2065	K021755470	Ceramic CAP	CH	50WV	47pF	L3001	L3001	Inductor
C2066	K021755470	Ceramic CAP	CH	50WV	15pF	M3001	M3001	Inductor
C2067	K021755470	Ceramic CAP	SI	50WV	100pF	N3001	N3001	Inductor
C2068	K40129004	Al. Electro CAP		16WV	10uF	O3001	O3001	Inductor
C2069	K13179008	Ceramic CAP	F	50WV	0.01uF	P3001	P3001	Inductor
C2070	K13179008	Ceramic CAP	F	50WV	0.01uF	Q3002	Q3002	IC
C2071	K12171102	Ceramic CAP	E	50WV	0.001uF	R3001	R3001	Resistor
C2072	K12171102	Ceramic CAP	E	50WV	0.001uF	S3001	S3001	Resistor
C2073	K12171102	Ceramic CAP	E	50WV	0.001uF	T3001	T3001	Resistor
C2074	K12171102	Ceramic CAP	SI	50WV	0.001uF	U3001	U3001	Resistor
C2075	K12171102	Ceramic CAP	SI	50WV	0.001uF	V3001	V3001	Resistor
C2076	K00175101	Ceramic CAP	SL	50WV	100pF	W3001	W3001	Resistor
C2077	K12171102	Ceramic CAP	E	50WV	0.001uF	X3001	X3001	Resistor
C2078	K12171102	Ceramic CAP	E	50WV	0.001uF	Y3001	Y3001	Resistor
C2079	K12171102	Ceramic CAP	E	50WV	0.001uF	Z3001	Z3001	Resistor
C2080	K12171102	Ceramic CAP	SI	50WV	0.001uF	AA3001	AA3001	Resistor
C2081	K12171102	Ceramic CAP	SI	50WV	0.001uF	AB3001	AB3001	Resistor
C2082	K12171102	Ceramic CAP	SI	50WV	0.001uF	AC3001	AC3001	Resistor
C2083	K12171102	Ceramic CAP	SI	50WV	0.001uF	AD3001	AD3001	Resistor
C2084	K12171102	Ceramic CAP	CH	50WV	0.001uF	AE3001	AE3001	Resistor
C2085	K12171102	Ceramic CAP	CH	50WV	0.001uF	AF3001	AF3001	Resistor
C2086	K12171102	Ceramic CAP	CH	50WV	0.001uF	AG3001	AG3001	Resistor
C2087	K12171102	Ceramic CAP	CH	50WV	0.001uF	AH3001	AH3001	Resistor
C2088	K12171102	Ceramic CAP	CH	50WV	0.001uF	AI3001	AI3001	Resistor
C2089	K12171102	Ceramic CAP	CH	50WV	0.001uF	AJ3001	AJ3001	Resistor
C2090	K12171102	Ceramic CAP	CH	50WV	0.001uF	AK3001	AK3001	Resistor
C2091	K12171102	Ceramic CAP	CH	50WV	0.001uF	AL3001	AL3001	Resistor
C2092	K12171102	Ceramic CAP	CH	50WV	0.001uF	AM3001	AM3001	Resistor
C2093	K12171102	Ceramic CAP	CH	50WV	0.001uF	AN3001	AN3001	Resistor
C2094	K12171102	Ceramic CAP	CH	50WV	0.001uF	AO3001	AO3001	Resistor
C2095	K12171102	Ceramic CAP	CH	50WV	0.001uF	AP3001	AP3001	Resistor
TC-001	K91 00030	Variable CAP		40pF		B3001	B3001	Resistor
T2001	L1020469	Coil				B3002	B3002	Resistor
T2002	L1020469	Coil				B3003	B3003	Resistor
T2003	L1020469	Coil				B3004	B3004	Resistor
T2004	L1020469	Coil				B3005	B3005	Resistor
T2005	L1020469	Coil				B3006	B3006	Resistor
T2006	L1020469	Coil				B3007	B3007	Resistor
T2007	L1020469	Coil				B3008	B3008	Resistor
T2008	L1020469	Coil				B3009	B3009	Resistor
T2009	L1020469	Coil				B3010	B3010	Resistor
T2010	L1020469	Coil				B3011	B3011	Resistor
T2011	L1020469	Coil				B3012	B3012	Resistor
T2012	L1020469	Coil				B3013	B3013	Resistor
T2013	L1020469	Coil				B3014	B3014	Resistor
T2014	L1020469	Coil				B3015	B3015	Resistor
T2015	L1020469	Coil				B3016	B3016	Resistor
T2016	L1020469	Coil				B3017	B3017	Resistor
T2017	L1020469	Coil				B3018	B3018	Resistor
T2018	L1020469	Coil				B3019	B3019	Resistor
T2019	L1020469	Coil				B3020	B3020	Resistor
T2020	L1020469	Coil				B3021	B3021	Resistor
T2021	L1020469	Coil				B3022	B3022	Resistor
T2022	L1020469	Coil				B3023	B3023	Resistor
T2023	L1020469	Coil				B3024	B3024	Resistor
T2024	L1020469	Coil				B3025	B3025	Resistor
T2025	L1020469	Coil				B3026	B3026	Resistor
T2026	L1020469	Coil				B3027	B3027	Resistor
T2027	L1020469	Coil				B3028	B3028	Resistor
T2028	L1020469	Coil				B3029	B3029	Resistor
T2029	L1020469	Coil				B3030	B3030	Resistor
T2030	L1020469	Coil				B3031	B3031	Resistor
T2031	L1020469	Coil				B3032	B3032	Resistor
T2032	L1020469	Coil				B3033	B3033	Resistor
T2033	L1020469	Coil				B3034	B3034	Resistor
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T2036	L1020469	Coil				B3037	B3037	Resistor
T2037	L1020469	Coil				B3038	B3038	Resistor
T2038	L1020469	Coil				B3039	B3039	Resistor
T2039	L1020469	Coil				B3040	B3040	Resistor
T2040	L1020469	Coil				B3041	B3041	Resistor
T2041	L1020469	Coil				B3042	B3042	Resistor
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T2043	L1020469	Coil				B3044	B3044	Resistor
T2044	L1020469	Coil				B3045	B3045	Resistor
T2045	L1020469	Coil				B3046	B3046	Resistor
T2046	L1020469	Coil				B3047	B3047	Resistor
T2047	L1020469	Coil				B3048	B3048	Resistor
T2048	L1020469	Coil				B3049	B3049	Resistor
T2049	L1020469	Coil				B3050	B3050	Resistor
T2050	L1020469	Coil				B3051	B3051	Resistor
T2051	L1020469	Coil				B3052	B3052	Resistor
T2052	L1020469	Coil				B3053	B3053	Resistor
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T2054	L1020469	Coil				B3055	B3055	Resistor
T2055	L1020469	Coil				B3056	B3056	Resistor
T2056	L1020469	Coil				B3057	B3057	Resistor
T2057	L1020469	Coil				B3058	B3058	Resistor
T2058	L1020469	Coil				B3059	B3059	Resistor
T2059	L1020469	Coil				B3060	B3060	Resistor
T2060	L1020469	Coil				B3061	B3061	Resistor
T2061	L1020469	Coil				B3062	B3062	Resistor
T2062	L1020469	Coil				B3063	B3063	Resistor
T2063	L1020469	Coil				B3064	B3064	Resistor
T2064	L1020469	Coil				B3065	B3065	Resistor
T2065	L1020469	Coil				B3066	B3066	Resistor
T2066	L1020469	Coil				B3067	B3067	Resistor
T2067	L1020469	Coil				B3068	B3068	Resistor
T2068	L1020469	Coil				B3069	B3069	Resistor
T2069	L1020469	Coil				B3070	B3070	Resistor
T2070	L1020469	Coil				B3071	B3071	Resistor
T2071	L1020469	Coil				B3072	B3072	Resistor
T2072	L1020469	Coil				B3073	B3073	Resistor
T2073	L1020469	Coil				B3074	B3074	Resistor
T2074	L1020469	Coil				B3075	B3075	Resistor
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T2077	L1020469	Coil				B3078	B3078	Resistor
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T2079	L1020469	Coil				B3080	B3080	Resistor
T2080	L1020469	Coil				B3081	B3081	Resistor
T2081	L1020469	Coil				B3082	B3082	Resistor
T2082	L1020469	Coil				B3083	B3083	Resistor
T2083	L1020469	Coil				B3084	B3084	Resistor
T2084	L1020469	Coil				B3085	B3085	Resistor
T2085	L1020469	Coil				B3086	B3086	Resistor
T2086	L1020469	Coil				B3087	B3087	Resistor
T2087	L1020469	Coil				B3088	B3088	Resistor
T2088	L1020469	Coil				B3089	B3089	Resistor
T2089	L1020469	Coil				B3090	B3090	Resistor
T2090	L1020469	Coil				B3091	B3091	Resistor
T2091	L1020469	Coil				B3092	B3092	Resistor
T2092	L1020469	Coil				B3093	B3093	Resistor
T2093	L1020469	Coil				B3094	B3094	Resistor
T2094	L1020469	Coil				B3095	B3095	Resistor
T2095	L1020469	Coil				B3096	B3096	Resistor
T2096	L1020469	Coil				B3097	B3097	Resistor
T2097	L1020469	Coil				B3098	B3098	Resistor
T2098	L1020469	Coil				B3099	B3099	Resistor
T2099	L1020469	Coil				B3100	B3100	Resistor
T2100	L1020469	Coil				B3101	B3101	Resistor
T2101	L1020469	Coil				B3102	B3102	Resistor
T2102	L1020469	Coil				B3103	B3103	Resistor
T2103	L1020469	Coil				B3104	B3104	Resistor
T2104	L1020469	Coil				B3105	B3105	Resistor
T2105	L1020469	Coil				B3106	B3106	Resistor
T2106	L1020469	Coil				B3107	B3107	Resistor
T2107	L1020469	Coil				B3108	B3108	Resistor
T2108	L1020469	Coil				B3109	B3109	Resistor
T2109	L1020469	Coil				B3110	B3110	Resistor
T2110	L1020469	Coil				B3111	B3111	Resistor
T2111	L1020469	Coil				B3112	B3112	Resistor
T2112	L1020469	Coil				B3113	B3113	Resistor
T2113	L1020469	Coil				B3114	B3114	Resistor
T2114	L1020469	Coil				B3115	B3115	Resistor
T2115	L1020469	Coil				B3116	B3116	Resistor
T2116	L1020469	Coil				B3117	B3117	Resistor
T2117	L1020469	Coil				B3118	B3118	Resistor
T2118	L1020469	Coil				B3119	B3119	Resistor
T2119	L1020469	Coil				B3120	B3120	Resistor
T2120	L1020469	Coil				B3121	B3121	Resistor
T2121	L1020469	Coil				B3122	B3122	Resistor
T2122	L1020469	Coil				B3123	B3123	Resistor
T2123	L1020469	Coil				B3124	B3124	Resistor</

PORTS LIST

C1026	K1179005	Ceramic CAP	E	50WV	0.01uF	C1122	K22170235	CAP. Chip	CH	50WV	100pF
C1027	K1944405	Ceramic CAP	E	50WV	0.01uF						
C1028	K40109001	Al Electro CAP		10WV	100uF	T1001	L0020907	Coil			
C1030	K70447105	Tantalum CAP		25WV	1uF	T1002	L0020907	Coil			
C1031	K1944405	Ceramic CAP		25WV	0.047uF	L1001	L1190246	M. RFC		1uH	
C1032	K1944405	Ceramic CAP		25WV	0.047uF	L1002	L1190246	M. RFC		1uH	
C1033	K1944405	Ceramic CAP	E	50WV	0.001uF	L1003	L1190246	M. RFC		1uH	
C1034	K1317808	Ceramic CAP	F	50WV	0.01uF	L1004	L1190246	M. RFC		1uH	
C1035	K1944405	Ceramic CAP		25WV	0.1uF	L1005	L1190246	M. RFC		1uH	
C1038	K0175150	Ceramic CAP	RH	50WV	15pF	L1006	L1190246	M. RFC		1uH	
C1039	K0675101	Ceramic CAP	UJ	50WV	10pF	L1007	L1190258	M. RFC		10uH	
C1040	K0675101	Ceramic CAP	UJ	50WV	10pF	L1008	L1190189	M. RFC		10uH	
C1041	K1774008	Ceramic CAP	F	50WV	0.01uF	L1009	L1190189	M. RFC		10uH	
C1042	K40129004	Al Electro CAP		16WV	10uF	L1010	L1190189	M. RFC		10uH	
C1043	K12171102	Ceramic CAP	E	50WV	0.001uF	L1011	L1190270	M. RFC		100uH	
C1044	K12171102	Ceramic CAP	CH	50WV	0.001uF	L1012	L1190270	M. RFC		100uH	
C1045	K1379408	Ceramic CAP	E	50WV	0.01uF	L1013	L1190270	M. RFC		100uH	
C1046	K1379408	Ceramic CAP	RH	50WV	0.01uF	L1014	L1190270	M. RFC		100uH	
C1047	K1379408	Ceramic CAP	F	50WV	0.01uF	L1015	L1190270	M. RFC		100uH	
C1048	K1379408	Ceramic CAP	F	50WV	0.01uF	L1016	L1190270	M. RFC		100uH	
C1049	K1379408	Ceramic CAP	CK	50WV	0.01uF	L1017	L1190270	M. RFC		100uH	
C1050	K1379408	Ceramic CAP	RH	50WV	0.01uF	L1018	L1190270	M. RFC		100uH	
C1051	K1379408	Ceramic CAP	F	50WV	0.01uF	L1019	L1190270	M. RFC		100uH	
C1052	K1379408	Ceramic CAP	F	50WV	0.01uF	L1020	L1190270	M. RFC		100uH	
C1053	K1379408	Ceramic CAP	F	50WV	0.01uF	L1021	L1190270	M. RFC		100uH	
C1054	K1379408	Ceramic CAP	RH	50WV	0.01uF	L1022	L1190270	M. RFC		100uH	
C1055	K1379408	Ceramic CAP	E	50WV	0.01uF	L1023	L1190270	M. RFC		100uH	
C1056	K1379408	Ceramic CAP	CK	50WV	0.01uF	L1024	L1190270	M. RFC		100uH	
C1057	K1379408	Ceramic CAP	RH	50WV	0.01uF	L1025	L1190270	M. RFC		100uH	
C1058	K1379408	Ceramic CAP	F	50WV	0.01uF	L1026	L1190270	M. RFC		100uH	
C1059	K1379408	Ceramic CAP	CK	50WV	0.01uF	L1027	L1190270	M. RFC		100uH	
C1060	K1379408	Ceramic CAP	F	50WV	0.01uF	L1028	L1190270	M. RFC		100uH	
C1061	K1379408	Ceramic CAP	RH	50WV	0.01uF	L1029	L1190270	M. RFC		100uH	
C1062	K1379408	Ceramic CAP	F	50WV	0.01uF	L1030	L1190270	M. RFC		100uH	
C1063	K40129011	Al Electro CAP		50WV	10uF	L1031	L1190270	M. RFC		100uH	
C1064	K1379408	Ceramic CAP	F	50WV	0.01uF	L1032	L1190270	M. RFC		100uH	
C1065	K1379408	Ceramic CAP	F	50WV	0.01uF	L1033	L1190270	M. RFC		100uH	
C1066	K1379408	Ceramic CAP	F	50WV	0.01uF	L1034	L1190270	M. RFC		100uH	
C1067	K1379408	Ceramic CAP	F	50WV	0.01uF	L1035	L1190270	M. RFC		100uH	
C1068	K40129011	Al Electro CAP		10WV	100uF	L1036	L1190270	M. RFC		100uH	
C1069	K1944405	Ceramic CAP		25WV	0.047uF	L1037	L1190270	M. RFC		100uH	
C1070	K1944405	Ceramic CAP		25WV	0.047uF	L1038	L1190270	M. RFC		100uH	
C1071	K1944405	Ceramic CAP		25WV	0.047uF	L1039	L1190270	M. RFC		100uH	
C1072	K1944405	Ceramic CAP	E	50WV	0.01uF	L1040	L1190270	M. RFC		100uH	
C1073	K1944405	Ceramic CAP	F	50WV	0.01uF	L1041	L1190270	M. RFC		100uH	
C1074	K1944405	Ceramic CAP	F	50WV	0.01uF	L1042	L1190270	M. RFC		100uH	
C1075	K1944405	Ceramic CAP	CK	50WV	0.01uF	L1043	L1190270	M. RFC		100uH	
C1076	K1944405	Ceramic CAP	CK	50WV	0.01uF	L1044	L1190270	M. RFC		100uH	
C1077	K1944405	Ceramic CAP	E	50WV	0.01uF	L1045	L1190270	M. RFC		100uH	
C1078	K1944405	Ceramic CAP	F	50WV	0.01uF	L1046	L1190270	M. RFC		100uH	
C1079	K1944405	Ceramic CAP	F	50WV	0.01uF	L1047	L1190270	M. RFC		100uH	
C1080	K1944405	Ceramic CAP	F	50WV	0.01uF	L1048	L1190270	M. RFC		100uH	
C1081	K1944405	Ceramic CAP	F	50WV	0.01uF	L1049	L1190270	M. RFC		100uH	
C1082	K1944405	Ceramic CAP	CK	50WV	0.01uF	L1050	L1190270	M. RFC		100uH	
C1083	K1944405	Ceramic CAP	CK	50WV	0.01uF	L1051	L1190270	M. RFC		100uH	
C1084	K1944405	Ceramic CAP	E	50WV	0.01uF	L1052	L1190270	M. RFC		100uH	
C1085	K1944405	Ceramic CAP	F	50WV	0.01uF	L1053	L1190270	M. RFC		100uH	
C1086	K1944405	Ceramic CAP	F	50WV	0.01uF	L1054	L1190270	M. RFC		100uH	
C1087	K1944405	Ceramic CAP	F	50WV	0.01uF	L1055	L1190270	M. RFC		100uH	
C1088	K1944405	Ceramic CAP	F	50WV	0.01uF	L1056	L1190270	M. RFC		100uH	
C1089	K40129001	Al Electro CAP		10WV	100uF	L1057	L1190270	M. RFC		100uH	
C1090	K19149005	Ceramic CAP		35WV	0.1uF	L1058	L1190270	M. RFC		100uH	
C1091	K19149005	Ceramic CAP	F	50WV	0.01uF	L1059	L1190270	M. RFC		100uH	
C1092	K05175270	Ceramic CAP	RH	50WV	27pF	L1060	L1190270	M. RFC		100uH	
C1093	K05175270	Ceramic CAP	RH	50WV	27pF	L1061	L1190270	M. RFC		100uH	
C1094	K1379408	Ceramic CAP		25WV	0.047uF	L1062	L1190270	M. RFC		100uH	
C1095	K1379408	Ceramic CAP	RH	50WV	0.01uF	L1063	L1190270	M. RFC		100uH	
C1096	K1379408	Ceramic CAP	F	50WV	0.01uF	L1064	L1190270	M. RFC		100uH	
C1097	K1379408	Ceramic CAP	F	50WV	0.01uF	L1065	L1190270	M. RFC		100uH	
C1098	K1379408	Ceramic CAP	F	50WV	0.01uF	L1066	L1190270	M. RFC		100uH	
C1099	K1379408	Ceramic CAP	F	50WV	0.01uF	L1067	L1190270	M. RFC		100uH	
C1100	K1379408	Ceramic CAP	F	50WV	0.01uF	L1068	L1190270	M. RFC		100uH	
C1101	K1944405	Ceramic CAP		25WV	0.047uF	L1069	L1190270	M. RFC		100uH	
C1102	K1379408	Ceramic CAP	E	50WV	0.001uF	L1070	L1190270	M. RFC		100uH	
C1103	K05175270	Ceramic CAP	RH	50WV	27pF	L1071	L1190270	M. RFC		100uH	
C1104	K12171102	Ceramic CAP	F	50WV	0.001uF	L1072	L1190270	M. RFC		100uH	
C1105	K05175270	Ceramic CAP	RH	50WV	27pF	L1073	L1190270	M. RFC		100uH	
C1106	K12171102	Ceramic CAP	E	50WV	0.001uF	L1074	L1190270	M. RFC		100uH	
C1107	K1379408	Ceramic CAP	F	50WV	0.01uF	L1075	L1190270	M. RFC		100uH	
C1108	K0017510	Ceramic CAP	SL	50WV	100pF	L1076	L1190270	M. RFC		100uH	
C1109	K0175101	Ceramic CAP	SI	50WV	10pF	L1077	L1190270	M. RFC		100uH	
C1110	K0175101	Ceramic CAP	SI	50WV	10pF	L1078	L1190270	M. RFC		100uH	
C1111	K0017510	Ceramic CAP	SI	50WV	10pF	L1079	L1190270	M. RFC		100uH	
C1112	K12171102	Ceramic CAP	SL	50WV	10pF	L1080	L1190270	M. RFC		100uH	
C1113	K05175270	Ceramic CAP	SL	50WV	10pF	L1081	L1190270	M. RFC		100uH	
C1114	K70191294	Tantalum CAP		35WV	0.1uF	L1082	L1190270	M. RFC		100uH	
C1115	K12171102	Ceramic CAP	E	50WV	0.001uF	L1083	L1190270	M. RFC		100uH	
C1116	K12171102	Ceramic CAP	E	50WV	0.001uF	L1084	L1190270	M. RFC		100uH	
C1117	K40109002	Al Electro CAP		10WV	47uF	L1085	L1190270	M. RFC		100uH	
C1118	K05173070	Ceramic CAP	RH	50WV	7pF	L1086	L1190270	M. RFC		100uH	
C1119	K70147105	Tantalum CAP		25WV	1uF	L1087	L1190270	M. RFC		100uH	
C1120	K13179008	Ceramic CAP	F	50WV	0.01uF	L1088	L1190270	M. RFC		100uH	
C1121	K13179008	Ceramic CAP	F	50WV	0.01uF	L1089	L1190270	M. RFC		100uH	

PARTS LIST (FEM-MEMO)

L9190001 Ferrite Beads				R2034 J01225140 Carbon Film RES 1/6W 18 ohm PJ			
				R2035 J01225141 Carbon Film RES 1/6W 330 ohm PJ			
				R2036 J01225142 Carbon Film RES 1/6W 1k ohm PJ			
				R2037 J01225143 Carbon Film RES 1/6W 220 ohm PJ			
Sy. P.C. No. N				R2038 J01225144 Carbon Film RES 1/6W 22 ohm PJ			
F28981C1 Printed Circuit Board				R2039 J01225145 Carbon Film RES 1/6W 10 ohm PJ			
C018981AA PCB With Component				R2040 J01225146 Carbon Film RES 1/6W 1k ohm PJ			
				R2041 J01225147 Carbon Film RES 1/6W 10k ohm PJ			
				R2042 J01225148 Carbon Film RES 1/6W 470 ohm PJ			
				R2043 J01225149 Carbon Film RES 1/6W 10k ohm PJ			
				R2044 J01225150 Carbon Film RES 1/6W 470 ohm PJ			
				R2045 J01225151 Carbon Film RES 1/6W 47k ohm PJ			
				R2046 J01225152 Carbon Film RES 1/6W 22k ohm PJ			
				R2047 J01225153 Carbon Film RES 1/6W 20k ohm PJ			
				R2048 J01225154 Carbon Film RES 1/6W 100k ohm PJ			
				R2049 J01225155 Carbon Film RES 1/6W 47k ohm PJ			
				R2050 J01225156 Carbon Film RES 1/6W 22k ohm PJ			
				R2051 J01225157 Carbon Film RES 1/6W 10k ohm PJ			
				R2052 J01225158 Carbon Film RES 1/6W 22k ohm PJ			
				R2053 J01225159 Carbon Film RES 1/6W 47k ohm PJ			
				R2054 J01225160 Carbon Film RES 1/6W 1k ohm PJ			
				R2055 J01225161 Carbon Film RES 1/6W 100 ohm PJ			
				R2056 J01225162 Carbon Film RES 1/6W 22k ohm PJ			
				R2057 J01225163 Carbon Film RES 1/6W 5k ohm PJ			
				R2058 J01225164 Carbon Film RES 1/6W 56 ohm PJ			
				R2059 J01225165 Carbon Film RES 1/6W 220 ohm PJ			
				R2060 J01225166 Carbon Film RES 1/6W 100 ohm PJ			
				R2061 J01225167 Carbon Film RES 1/6W 47 ohm PJ			
				R2062 J01225168 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2063 J01225169 Carbon Film RES 1/6W 20k ohm PJ			
				R2064 J01225170 Carbon Film RES 1/6W 1k ohm PJ			
				R2065 J01225171 Carbon Film RES 1/6W 100 ohm PJ			
				R2066 J01225172 Carbon Film RES 1/6W 22k ohm PJ			
				R2067 J01225173 Carbon Film RES 1/6W 5k ohm PJ			
				R2068 J01225174 Carbon Film RES 1/6W 56 ohm PJ			
				R2069 J01225175 Carbon Film RES 1/6W 220 ohm PJ			
				R2070 J01225176 Carbon Film RES 1/6W 100 ohm PJ			
				R2071 J01225177 Carbon Film RES 1/6W 47 ohm PJ			
				R2072 J01225178 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2073 J01225179 Carbon Film RES 1/6W 20k ohm PJ			
				R2074 J01225180 Carbon Film RES 1/6W 1k ohm PJ			
				R2075 J01225181 Carbon Film RES 1/6W 100 ohm PJ			
				R2076 J01225182 Carbon Film RES 1/6W 47 ohm PJ			
				R2077 J01225183 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2078 J01225184 Carbon Film RES 1/6W 20k ohm PJ			
				R2079 J01225185 Carbon Film RES 1/6W 1k ohm PJ			
				R2080 J01225186 Carbon Film RES 1/6W 100 ohm PJ			
				R2081 J01225187 Carbon Film RES 1/6W 47 ohm PJ			
				R2082 J01225188 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2083 J01225189 Carbon Film RES 1/6W 20k ohm PJ			
				R2084 J01225190 Carbon Film RES 1/6W 1k ohm PJ			
				R2085 J01225191 Carbon Film RES 1/6W 100 ohm PJ			
				R2086 J01225192 Carbon Film RES 1/6W 47 ohm PJ			
				R2087 J01225193 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2088 J01225194 Carbon Film RES 1/6W 20k ohm PJ			
				R2089 J01225195 Carbon Film RES 1/6W 1k ohm PJ			
				R2090 J01225196 Carbon Film RES 1/6W 100 ohm PJ			
				R2091 J01225197 Carbon Film RES 1/6W 47 ohm PJ			
				R2092 J01225198 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2093 J01225199 Carbon Film RES 1/6W 20k ohm PJ			
				R2094 J01225200 Carbon Film RES 1/6W 1k ohm PJ			
				R2095 J01225201 Carbon Film RES 1/6W 100 ohm PJ			
				R2096 J01225202 Carbon Film RES 1/6W 47 ohm PJ			
				R2097 J01225203 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2098 J01225204 Carbon Film RES 1/6W 20k ohm PJ			
				R2099 J01225205 Carbon Film RES 1/6W 1k ohm PJ			
				R2100 J01225206 Carbon Film RES 1/6W 100 ohm PJ			
				R2101 J01225207 Carbon Film RES 1/6W 47 ohm PJ			
				R2102 J01225208 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2103 J01225209 Carbon Film RES 1/6W 20k ohm PJ			
				R2104 J01225210 Carbon Film RES 1/6W 1k ohm PJ			
				R2105 J01225211 Carbon Film RES 1/6W 100 ohm PJ			
				R2106 J01225212 Carbon Film RES 1/6W 47 ohm PJ			
				R2107 J01225213 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2108 J01225214 Carbon Film RES 1/6W 20k ohm PJ			
				R2109 J01225215 Carbon Film RES 1/6W 1k ohm PJ			
				R2110 J01225216 Carbon Film RES 1/6W 100 ohm PJ			
				R2111 J01225217 Carbon Film RES 1/6W 47 ohm PJ			
				R2112 J01225218 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2113 J01225219 Carbon Film RES 1/6W 20k ohm PJ			
				R2114 J01225220 Carbon Film RES 1/6W 1k ohm PJ			
				R2115 J01225221 Carbon Film RES 1/6W 100 ohm PJ			
				R2116 J01225222 Carbon Film RES 1/6W 47 ohm PJ			
				R2117 J01225223 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2118 J01225224 Carbon Film RES 1/6W 20k ohm PJ			
				R2119 J01225225 Carbon Film RES 1/6W 1k ohm PJ			
				R2120 J01225226 Carbon Film RES 1/6W 100 ohm PJ			
				R2121 J01225227 Carbon Film RES 1/6W 47 ohm PJ			
				R2122 J01225228 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2123 J01225229 Carbon Film RES 1/6W 20k ohm PJ			
				R2124 J01225230 Carbon Film RES 1/6W 1k ohm PJ			
				R2125 J01225231 Carbon Film RES 1/6W 100 ohm PJ			
				R2126 J01225232 Carbon Film RES 1/6W 47 ohm PJ			
				R2127 J01225233 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2128 J01225234 Carbon Film RES 1/6W 20k ohm PJ			
				R2129 J01225235 Carbon Film RES 1/6W 1k ohm PJ			
				R2130 J01225236 Carbon Film RES 1/6W 100 ohm PJ			
				R2131 J01225237 Carbon Film RES 1/6W 47 ohm PJ			
				R2132 J01225238 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2133 J01225239 Carbon Film RES 1/6W 20k ohm PJ			
				R2134 J01225240 Carbon Film RES 1/6W 1k ohm PJ			
				R2135 J01225241 Carbon Film RES 1/6W 100 ohm PJ			
				R2136 J01225242 Carbon Film RES 1/6W 47 ohm PJ			
				R2137 J01225243 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2138 J01225244 Carbon Film RES 1/6W 20k ohm PJ			
				R2139 J01225245 Carbon Film RES 1/6W 1k ohm PJ			
				R2140 J01225246 Carbon Film RES 1/6W 100 ohm PJ			
				R2141 J01225247 Carbon Film RES 1/6W 47 ohm PJ			
				R2142 J01225248 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2143 J01225249 Carbon Film RES 1/6W 20k ohm PJ			
				R2144 J01225250 Carbon Film RES 1/6W 1k ohm PJ			
				R2145 J01225251 Carbon Film RES 1/6W 100 ohm PJ			
				R2146 J01225252 Carbon Film RES 1/6W 47 ohm PJ			
				R2147 J01225253 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2148 J01225254 Carbon Film RES 1/6W 20k ohm PJ			
				R2149 J01225255 Carbon Film RES 1/6W 1k ohm PJ			
				R2150 J01225256 Carbon Film RES 1/6W 100 ohm PJ			
				R2151 J01225257 Carbon Film RES 1/6W 47 ohm PJ			
				R2152 J01225258 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2153 J01225259 Carbon Film RES 1/6W 20k ohm PJ			
				R2154 J01225260 Carbon Film RES 1/6W 1k ohm PJ			
				R2155 J01225261 Carbon Film RES 1/6W 100 ohm PJ			
				R2156 J01225262 Carbon Film RES 1/6W 47 ohm PJ			
				R2157 J01225263 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2158 J01225264 Carbon Film RES 1/6W 20k ohm PJ			
				R2159 J01225265 Carbon Film RES 1/6W 1k ohm PJ			
				R2160 J01225266 Carbon Film RES 1/6W 100 ohm PJ			
				R2161 J01225267 Carbon Film RES 1/6W 47 ohm PJ			
				R2162 J01225268 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2163 J01225269 Carbon Film RES 1/6W 20k ohm PJ			
				R2164 J01225270 Carbon Film RES 1/6W 1k ohm PJ			
				R2165 J01225271 Carbon Film RES 1/6W 100 ohm PJ			
				R2166 J01225272 Carbon Film RES 1/6W 47 ohm PJ			
				R2167 J01225273 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2168 J01225274 Carbon Film RES 1/6W 20k ohm PJ			
				R2169 J01225275 Carbon Film RES 1/6W 1k ohm PJ			
				R2170 J01225276 Carbon Film RES 1/6W 100 ohm PJ			
				R2171 J01225277 Carbon Film RES 1/6W 47 ohm PJ			
				R2172 J01225278 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2173 J01225279 Carbon Film RES 1/6W 20k ohm PJ			
				R2174 J01225280 Carbon Film RES 1/6W 1k ohm PJ			
				R2175 J01225281 Carbon Film RES 1/6W 100 ohm PJ			
				R2176 J01225282 Carbon Film RES 1/6W 47 ohm PJ			
				R2177 J01225283 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2178 J01225284 Carbon Film RES 1/6W 20k ohm PJ			
				R2179 J01225285 Carbon Film RES 1/6W 1k ohm PJ			
				R2180 J01225286 Carbon Film RES 1/6W 100 ohm PJ			
				R2181 J01225287 Carbon Film RES 1/6W 47 ohm PJ			
				R2182 J01225288 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2183 J01225289 Carbon Film RES 1/6W 20k ohm PJ			
				R2184 J01225290 Carbon Film RES 1/6W 1k ohm PJ			
				R2185 J01225291 Carbon Film RES 1/6W 100 ohm PJ			
				R2186 J01225292 Carbon Film RES 1/6W 47 ohm PJ			
				R2187 J01225293 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2188 J01225294 Carbon Film RES 1/6W 20k ohm PJ			
				R2189 J01225295 Carbon Film RES 1/6W 1k ohm PJ			
				R2190 J01225296 Carbon Film RES 1/6W 100 ohm PJ			
				R2191 J01225297 Carbon Film RES 1/6W 47 ohm PJ			
				R2192 J01225298 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2193 J01225299 Carbon Film RES 1/6W 20k ohm PJ			
				R2194 J01225300 Carbon Film RES 1/6W 1k ohm PJ			
				R2195 J01225301 Carbon Film RES 1/6W 100 ohm PJ			
				R2196 J01225302 Carbon Film RES 1/6W 47 ohm PJ			
				R2197 J01225303 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2198 J01225304 Carbon Film RES 1/6W 20k ohm PJ			
				R2199 J01225305 Carbon Film RES 1/6W 1k ohm PJ			
				R2200 J01225306 Carbon Film RES 1/6W 100 ohm PJ			
				R2201 J01225307 Carbon Film RES 1/6W 47 ohm PJ			
				R2202 J01225308 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2203 J01225309 Carbon Film RES 1/6W 20k ohm PJ			
				R2204 J01225310 Carbon Film RES 1/6W 1k ohm PJ			
				R2205 J01225311 Carbon Film RES 1/6W 100 ohm PJ			
				R2206 J01225312 Carbon Film RES 1/6W 47 ohm PJ			
				R2207 J01225313 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2208 J01225314 Carbon Film RES 1/6W 20k ohm PJ			
				R2209 J01225315 Carbon Film RES 1/6W 1k ohm PJ			
				R2210 J01225316 Carbon Film RES 1/6W 100 ohm PJ			
				R2211 J01225317 Carbon Film RES 1/6W 47 ohm PJ			
				R2212 J01225318 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2213 J01225319 Carbon Film RES 1/6W 20k ohm PJ			
				R2214 J01225320 Carbon Film RES 1/6W 1k ohm PJ			
				R2215 J01225321 Carbon Film RES 1/6W 100 ohm PJ			
				R2216 J01225322 Carbon Film RES 1/6W 47 ohm PJ			
				R2217 J01225323 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2218 J01225324 Carbon Film RES 1/6W 20k ohm PJ			
				R2219 J01225325 Carbon Film RES 1/6W 1k ohm PJ			
				R2220 J01225326 Carbon Film RES 1/6W 100 ohm PJ			
				R2221 J01225327 Carbon Film RES 1/6W 47 ohm PJ			
				R2222 J01225328 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2223 J01225329 Carbon Film RES 1/6W 20k ohm PJ			
				R2224 J01225330 Carbon Film RES 1/6W 1k ohm PJ			
				R2225 J01225331 Carbon Film RES 1/6W 100 ohm PJ			
				R2226 J01225332 Carbon Film RES 1/6W 47 ohm PJ			
				R2227 J01225333 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2228 J01225334 Carbon Film RES 1/6W 20k ohm PJ			
				R2229 J01225335 Carbon Film RES 1/6W 1k ohm PJ			
				R2230 J01225336 Carbon Film RES 1/6W 100 ohm PJ			
				R2231 J01225337 Carbon Film RES 1/6W 47 ohm PJ			
				R2232 J01225338 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2233 J01225339 Carbon Film RES 1/6W 20k ohm PJ			
				R2234 J01225340 Carbon Film RES 1/6W 1k ohm PJ			
				R2235 J01225341 Carbon Film RES 1/6W 100 ohm PJ			
				R2236 J01225342 Carbon Film RES 1/6W 47 ohm PJ			
				R2237 J01225343 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2238 J01225344 Carbon Film RES 1/6W 20k ohm PJ			
				R2239 J01225345 Carbon Film RES 1/6W 1k ohm PJ			
				R2240 J01225346 Carbon Film RES 1/6W 100 ohm PJ			
				R2241 J01225347 Carbon Film RES 1/6W 47 ohm PJ			
				R2242 J01225348 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2243 J01225349 Carbon Film RES 1/6W 20k ohm PJ			
				R2244 J01225350 Carbon Film RES 1/6W 1k ohm PJ			
				R2245 J01225351 Carbon Film RES 1/6W 100 ohm PJ			
				R2246 J01225352 Carbon Film RES 1/6W 47 ohm PJ			
				R2247 J01225353 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2248 J01225354 Carbon Film RES 1/6W 20k ohm PJ			
				R2249 J01225355 Carbon Film RES 1/6W 1k ohm PJ			
				R2250 J01225356 Carbon Film RES 1/6W 100 ohm PJ			
				R2251 J01225357 Carbon Film RES 1/6W 47 ohm PJ			
				R2252 J01225358 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2253 J01225359 Carbon Film RES 1/6W 20k ohm PJ			
				R2254 J01225360 Carbon Film RES 1/6W 1k ohm PJ			
				R2255 J01225361 Carbon Film RES 1/6W 100 ohm PJ			
				R2256 J01225362 Carbon Film RES 1/6W 47 ohm PJ			
				R2257 J01225363 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2258 J01225364 Carbon Film RES 1/6W 20k ohm PJ			
				R2259 J01225365 Carbon Film RES 1/6W 1k ohm PJ			
				R2260 J01225366 Carbon Film RES 1/6W 100 ohm PJ			
				R2261 J01225367 Carbon Film RES 1/6W 47 ohm PJ			
				R2262 J01225368 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2263 J01225369 Carbon Film RES 1/6W 20k ohm PJ			
				R2264 J01225370 Carbon Film RES 1/6W 1k ohm PJ			
				R2265 J01225371 Carbon Film RES 1/6W 100 ohm PJ			
				R2266 J01225372 Carbon Film RES 1/6W 47 ohm PJ			
				R2267 J01225373 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2268 J01225374 Carbon Film RES 1/6W 20k ohm PJ			
				R2269 J01225375 Carbon Film RES 1/6W 1k ohm PJ			
				R2270 J01225376 Carbon Film RES 1/6W 100 ohm PJ			
				R2271 J01225377 Carbon Film RES 1/6W 47 ohm PJ			
				R2272 J01225378 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2273 J01225379 Carbon Film RES 1/6W 20k ohm PJ			
				R2274 J01225380 Carbon Film RES 1/6W 1k ohm PJ			
				R2275 J01225381 Carbon Film RES 1/6W 100 ohm PJ			
				R2276 J01225382 Carbon Film RES 1/6W 47 ohm PJ			
				R2277 J01225383 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2278 J01225384 Carbon Film RES 1/6W 20k ohm PJ			
				R2279 J01225385 Carbon Film RES 1/6W 1k ohm PJ			
				R2280 J01225386 Carbon Film RES 1/6W 100 ohm PJ			
				R2281 J01225387 Carbon Film RES 1/6W 47 ohm PJ			
				R2282 J01225388 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2283 J01225389 Carbon Film RES 1/6W 20k ohm PJ			
				R2284 J01225390 Carbon Film RES 1/6W 1k ohm PJ			
				R2285 J01225391 Carbon Film RES 1/6W 100 ohm PJ			
				R2286 J01225392 Carbon Film RES 1/6W 47 ohm PJ			
				R2287 J01225393 Carbon Film RES 1/6W 6.8k ohm PJ			
				R2288 J01225394 Carbon Film RES 1/6W 20k ohm PJ			
				R2289 J01225395 Carbon Film RES 1/6W 1k ohm PJ			
				R2290 J01225396 Carbon Film RES 1/6W 100 ohm PJ			
				R2291 J01225397 Carbon Film RES 1/6W 47 ohm PJ			
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PARTS LIST (ENCL. 2)

MAIN CHASSIS							
Sy No	No	Description	Det.	Sy No	No	Description	Det.
	R0804800	Chassis		R1002	J24205474	RES. Chip	1/10W 470k ohm
	R 11.03A	Shield Cover		R1003	J24205474	RES. Chip	1/10W 470k ohm
	R 11.10	Shield Cover		R1004	J24205474	RES. Chip	1/10W 470k ohm
	R 11.20	Shield Cover		R 105	J24205474	RES. Chip	1/10W 470k ohm
	R 11.30	Shield Cover		R 106	J24205474	RES. Chip	1/10W 470k ohm
	R 11.40	Shield Cover		R 107	J24205474	RES. Chip	1/10W 470k ohm
	R 11.50	Shield Cover		R 108	J24205474	RES. Chip	1/10W 470k ohm
	R 11.60	Shield Cover		R 109	J24205474	RES. Chip	1/10W 470k ohm
	R 11.70	Shield Cover		R 110	J24205474	RES. Chip	1/10W 470k ohm
	R 11.80	Shield Cover		R 111	J24205474	RES. Chip	1/10W 470k ohm
	R 11.90	Shield Cover		R 112	J24205474	RES. Chip	1/10W 470k ohm
	R 12.00	Shield Cover		R 113	J24205474	RES. Chip	1/10W 470k ohm
	R 12.10	Shield Cover		R 114	J24205474	RES. Chip	1/10W 470k ohm
	R 12.20	Shield Cover		R 115	J24205474	RES. Chip	1/10W 470k ohm
	R 12.30	Shield Cover		R 116	J24205474	RES. Chip	1/10W 470k ohm
	R 12.40	Shield Cover		R 117	J24205474	RES. Chip	1/10W 470k ohm
	R 12.50	Shield Cover		R 118	J24205474	RES. Chip	1/10W 470k ohm
	R 12.60	Shield Cover		R 119	J24205474	RES. Chip	1/10W 470k ohm
	R 12.70	Shield Cover		R 120	J24205474	RES. Chip	1/10W 470k ohm
	R 12.80	Shield Cover		R 121	J24205474	RES. Chip	1/10W 470k ohm
	R 12.90	Shield Cover		R 122	J24205474	RES. Chip	1/10W 470k ohm
	R 13.00	Shield Cover		R 123	J24205474	RES. Chip	1/10W 470k ohm
	R 13.10	Shield Cover		R 124	J24205474	RES. Chip	1/10W 470k ohm
	R 13.20	Shield Cover		R 125	J24205474	RES. Chip	1/10W 470k ohm
	R 13.30	Shield Cover		R 126	J24205474	RES. Chip	1/10W 470k ohm
	R 13.40	Shield Cover		R 127	J24205474	RES. Chip	1/10W 470k ohm
	R 13.50	Shield Cover		R 128	J24205474	RES. Chip	1/10W 470k ohm
	R 13.60	Shield Cover		R 129	J24205474	RES. Chip	1/10W 470k ohm
	R 13.70	Shield Cover		R 130	J24205474	RES. Chip	1/10W 470k ohm
	R 13.80	Shield Cover		R 131	J24205474	RES. Chip	1/10W 470k ohm
	R 13.90	Shield Cover		R 132	J24205474	RES. Chip	1/10W 470k ohm
	R 14.00	Shield Cover		R 133	J24205474	RES. Chip	1/10W 470k ohm
	R 14.10	Shield Cover		R 134	J24205474	RES. Chip	1/10W 470k ohm
	R 14.20	Shield Cover		R 135	J24205474	RES. Chip	1/10W 470k ohm
	R 14.30	Shield Cover		R 136	J24205474	RES. Chip	1/10W 470k ohm
	R 14.40	Shield Cover		R 137	J24205474	RES. Chip	1/10W 470k ohm
	R 14.50	Shield Cover		R 138	J24205474	RES. Chip	1/10W 470k ohm
	R 14.60	Shield Cover		R 139	J24205474	RES. Chip	1/10W 470k ohm
	R 14.70	Shield Cover		R 140	J24205474	RES. Chip	1/10W 470k ohm
	R 14.80	Shield Cover		R 141	J24205474	RES. Chip	1/10W 470k ohm
	R 14.90	Shield Cover		R 142	J24205474	RES. Chip	1/10W 470k ohm
	R 15.00	Shield Cover		R 143	J24205474	RES. Chip	1/10W 470k ohm
	R 15.10	Shield Cover		R 144	J24205474	RES. Chip	1/10W 470k ohm
	R 15.20	Shield Cover		R 145	J24205474	RES. Chip	1/10W 470k ohm
	R 15.30	Shield Cover		R 146	J24205474	RES. Chip	1/10W 470k ohm
	R 15.40	Shield Cover		R 147	J24205474	RES. Chip	1/10W 470k ohm
	R 15.50	Shield Cover		R 148	J24205474	RES. Chip	1/10W 470k ohm
	R 15.60	Shield Cover		R 149	J24205474	RES. Chip	1/10W 470k ohm
	R 15.70	Shield Cover		R 150	J24205474	RES. Chip	1/10W 470k ohm
	R 15.80	Shield Cover		R 151	J24205474	RES. Chip	1/10W 470k ohm
	R 15.90	Shield Cover		R 152	J24205474	RES. Chip	1/10W 470k ohm
	R 16.00	Shield Cover		R 153	J24205474	RES. Chip	1/10W 470k ohm
	R 16.10	Shield Cover		R 154	J24205474	RES. Chip	1/10W 470k ohm
	R 16.20	Shield Cover		R 155	J24205474	RES. Chip	1/10W 470k ohm
	R 16.30	Shield Cover		R 156	J24205474	RES. Chip	1/10W 470k ohm
	R 16.40	Shield Cover		R 157	J24205474	RES. Chip	1/10W 470k ohm
	R 16.50	Shield Cover		R 158	J24205474	RES. Chip	1/10W 470k ohm
	R 16.60	Shield Cover		R 159	J24205474	RES. Chip	1/10W 470k ohm
	R 16.70	Shield Cover		R 160	J24205474	RES. Chip	1/10W 470k ohm
	R 16.80	Shield Cover		R 161	J24205474	RES. Chip	1/10W 470k ohm
	R 16.90	Shield Cover		R 162	J24205474	RES. Chip	1/10W 470k ohm
	R 17.00	Shield Cover		R 163	J24205474	RES. Chip	1/10W 470k ohm
	R 17.10	Shield Cover		R 164	J24205474	RES. Chip	1/10W 470k ohm
	R 17.20	Shield Cover		R 165	J24205474	RES. Chip	1/10W 470k ohm
	R 17.30	Shield Cover		R 166	J24205474	RES. Chip	1/10W 470k ohm
	R 17.40	Shield Cover		R 167	J24205474	RES. Chip	1/10W 470k ohm
	R 17.50	Shield Cover		R 168	J24205474	RES. Chip	1/10W 470k ohm
	R 17.60	Shield Cover		R 169	J24205474	RES. Chip	1/10W 470k ohm
	R 17.70	Shield Cover		R 170	J24205474	RES. Chip	1/10W 470k ohm
	R 17.80	Shield Cover		R 171	J24205474	RES. Chip	1/10W 470k ohm
	R 17.90	Shield Cover		R 172	J24205474	RES. Chip	1/10W 470k ohm
	R 18.00	Shield Cover		R 173	J24205474	RES. Chip	1/10W 470k ohm
	R 18.10	Shield Cover		R 174	J24205474	RES. Chip	1/10W 470k ohm
	R 18.20	Shield Cover		R 175	J24205474	RES. Chip	1/10W 470k ohm
	R 18.30	Shield Cover		R 176	J24205474	RES. Chip	1/10W 470k ohm
	R 18.40	Shield Cover		R 177	J24205474	RES. Chip	1/10W 470k ohm
	R 18.50	Shield Cover		R 178	J24205474	RES. Chip	1/10W 470k ohm
	R 18.60	Shield Cover		R 179	J24205474	RES. Chip	1/10W 470k ohm
	R 18.70	Shield Cover		R 180	J24205474	RES. Chip	1/10W 470k ohm
	R 18.80	Shield Cover		R 181	J24205474	RES. Chip	1/10W 470k ohm
	R 18.90	Shield Cover		R 182	J24205474	RES. Chip	1/10W 470k ohm
	R 19.00	Shield Cover		R 183	J24205474	RES. Chip	1/10W 470k ohm
	R 19.10	Shield Cover		R 184	J24205474	RES. Chip	1/10W 470k ohm
	R 19.20	Shield Cover		R 185	J24205474	RES. Chip	1/10W 470k ohm
	R 19.30	Shield Cover		R 186	J24205474	RES. Chip	1/10W 470k ohm
	R 19.40	Shield Cover		R 187	J24205474	RES. Chip	1/10W 470k ohm
	R 19.50	Shield Cover		R 188	J24205474	RES. Chip	1/10W 470k ohm
	R 19.60	Shield Cover		R 189	J24205474	RES. Chip	1/10W 470k ohm
	R 19.70	Shield Cover		R 190	J24205474	RES. Chip	1/10W 470k ohm
	R 19.80	Shield Cover		R 191	J24205474	RES. Chip	1/10W 470k ohm
	R 19.90	Shield Cover		R 192	J24205474	RES. Chip	1/10W 470k ohm
	R 20.00	Shield Cover		R 193	J24205474	RES. Chip	1/10W 470k ohm
	R 20.10	Shield Cover		R 194	J24205474	RES. Chip	1/10W 470k ohm
	R 20.20	Shield Cover		R 195	J24205474	RES. Chip	1/10W 470k ohm
	R 20.30	Shield Cover		R 196	J24205474	RES. Chip	1/10W 470k ohm
	R 20.40	Shield Cover		R 197	J24205474	RES. Chip	1/10W 470k ohm
	R 20.50	Shield Cover		R 198	J24205474	RES. Chip	1/10W 470k ohm
	R 20.60	Shield Cover		R 199	J24205474	RES. Chip	1/10W 470k ohm
	R 20.70	Shield Cover		R 200	J24205474	RES. Chip	1/10W 470k ohm
	R 20.80	Shield Cover		R 201	J24205474	RES. Chip	1/10W 470k ohm
	R 20.90	Shield Cover		R 202	J24205474	RES. Chip	1/10W 470k ohm
	R 21.00	Shield Cover		R 203	J24205474	RES. Chip	1/10W 470k ohm
	R 21.10	Shield Cover		R 204	J24205474	RES. Chip	1/10W 470k ohm
	R 21.20	Shield Cover		R 205	J24205474	RES. Chip	1/10W 470k ohm
	R 21.30	Shield Cover		R 206	J24205474	RES. Chip	1/10W 470k ohm
	R 21.40	Shield Cover		R 207	J24205474	RES. Chip	1/10W 470k ohm
	R 21.50	Shield Cover		R 208	J24205474	RES. Chip	1/10W 470k ohm
	R 21.60	Shield Cover		R 209	J24205474	RES. Chip	1/10W 470k ohm
	R 21.70	Shield Cover		R 210	J24205474	RES. Chip	1/10W 470k ohm
	R 21.80	Shield Cover		R 211	J24205474	RES. Chip	1/10W 470k ohm
	R 21.90	Shield Cover		R 212	J24205474	RES. Chip	1/10W 470k ohm
	R 22.00	Shield Cover		R 213	J24205474	RES. Chip	1/10W 470k ohm
	R 22.10	Shield Cover		R 214	J24205474	RES. Chip	1/10W 470k ohm
	R 22.20	Shield Cover		R 215	J24205474	RES. Chip	1/10W 470k ohm
	R 22.30	Shield Cover		R 216	J24205474	RES. Chip	1/10W 470k ohm
	R 22.40	Shield Cover		R 217	J24205474	RES. Chip	1/10W 470k ohm
	R 22.50	Shield Cover		R 218	J24205474	RES. Chip	1/10W 470k ohm
	R 22.60	Shield Cover		R 219	J24205474	RES. Chip	1/10W 470k ohm
	R 22.70	Shield Cover		R 220	J24205474	RES. Chip	1/10W 470k ohm
	R 22.80	Shield Cover		R 221	J24205474	RES. Chip	1/10W 470k ohm
	R 22.90	Shield Cover		R 222	J24205474	RES. Chip	1/10W 470k ohm
	R 23.00	Shield Cover		R 223	J24205474	RES. Chip	1/10W 470k ohm
	R 23.10	Shield Cover		R 224	J24205474	RES. Chip	1/10W 470k ohm
	R 23.20	Shield Cover		R 225	J24205474	RES. Chip	1/10W 470k ohm
	R 23.30	Shield Cover		R 226	J24205474	RES. Chip	1/10W 470k ohm
	R 23.40	Shield Cover		R 227	J24205474	RES. Chip	1/10W 470k ohm
	R 23.50	Shield Cover		R 228	J24205474	RES. Chip	1/10W 470k ohm
	R 23.60	Shield Cover		R 229	J24205474	RES. Chip	1/10W 470k ohm
	R 23.70	Shield Cover		R 230	J24205474	RES. Chip	1/10W 470k ohm
	R 23.80	Shield Cover		R 231	J24205474	RES. Chip	1/10W 470k ohm
	R 23.90	Shield Cover		R 232	J24205474	RES. Chip	1/10W 470k ohm
	R 24.00	Shield Cover		R 233	J24205474	RES. Chip	1/10W 470k ohm
	R 24.10	Shield Cover		R 234	J24205474	RES. Chip	1/10W 470k ohm
	R 24.20	Shield Cover		R 235	J24205474	RES. Chip	1/10W 470k ohm
	R 24.30	Shield Cover		R 236	J24205474	RES. Chip	1/10W 470k ohm
	R 24.40	Shield Cover		R 237	J24205474	RES. Chip	1/10W 470k ohm
	R 24.50	Shield Cover		R 238	J24205474	RES. Chip	1/10W 470k ohm
	R 24.60	Shield Cover		R 239	J24205474	RES. Chip	1/10W 470k ohm
	R 24.70	Shield Cover		R 240	J24205474	RES. Chip	1/10W 470k ohm
	R 24.80	Shield Cover		R 241	J24205474	RES. Chip	1/10W 470k ohm
	R 24.90	Shield Cover		R 242	J24205474	RES. Chip	1/10W 470k ohm
	R 25.00	Shield Cover		R 243	J24205474	RES. Chip	1/10W 470k ohm
	R 25.10	Shield Cover		R 244	J24205474	RES. Chip	1/10W 470k ohm
	R 25.20	Shield Cover		R 245	J24205474	RES. Chip	1/10W 470k ohm
	R 25.30	Shield Cover		R 246	J24205474	RES. Chip	1/10W 470k ohm
	R 25.40	Shield Cover		R 247	J24205474	RES. Chip	1/10W 470k ohm
	R 25.50	Shield Cover		R 248	J24205474	RES. Chip	1/10W 470k ohm
	R 25.60	Shield Cover		R 249	J24205474	RES. Chip	1/10W 470k ohm
	R 25.70	Shield Cover		R 250	J24205474	RES. Chip	1/10W 470k ohm
	R 25.80	Shield Cover		R 251	J24205474	RES. Chip	1/10W 470k ohm
	R 25.90	Shield Cover		R 252	J24205474	RES. Chip	1/10W 470k ohm
	R 26.00	Shield Cover		R 253	J24205474	RES. Chip	1/10W 470k ohm
	R 26.10	Shield Cover		R 254	J24205474	RES. Chip	1/10W 470k ohm
	R 26.20	Shield Cover		R 255	J24205474	RES. Chip	1/10W 470k ohm
	R 26.30	Shield Cover		R 256	J24205474	RES. Chip	1/10W 470k ohm
	R 26.40	Shield Cover		R 257	J24205474	RES. Chip	1/10W 470k ohm
	R 26.50	Shield Cover		R 258	J24205474	RES. Chip	1/10W 470k ohm
	R 26.60	Shield Cover		R 259	J24205474	RES. Chip	1/10W 470k ohm
	R 26.70	Shield Cover		R 260	J24205474	RES. Chip	1/10W 470k ohm
	R 26.80	Shield Cover		R 261	J24205474	RES. Chip	1/10

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R1089	J24205182	RES	Chip	10W 1.8K ohm	C1054	K22170210	CAP	Chip	CH	50WV	8pF		
R1090	J24205182	RES	Chip	10W 1.8K ohm	C1055	K22170210	CAP	Chip	CH	50WV	15pF		
R1091	J24205182	RES	Chip	10W 1.8K ohm	C1056	K22170210	CAP	Chip	CH	50WV	9pF		
R1092	J24205182	RES	Chip	10W 1.8K ohm	C1057	K22170210	CAP	Chip	CH	50WV	10pF		
R1093	J24205182	RES	Chip	10W 1.8K ohm	C1058	K22170210	CAP	Chip	CH	50WV	9pF		
R1094	J24205182	RES	Chip	10W 1.8K ohm	C1059	K22170210	CAP	Chip	CH	50WV	9pF		
R1095	J24205182	RES	Chip	10W 1.8K ohm	C1060	K22170210	CAP	Chip	CH	50WV	9pF		
R1096	J24205182	RES	Chip	10W 1.8K ohm	C1061	K22170210	CAP	Chip	CH	50WV	9pF		
R1097	J24205182	RES	Chip	10W 1.8K ohm	C1062	K22170210	CAP	Chip	CH	50WV	9pF		
R1098	J24205182	RES	Chip	10W 1.8K ohm	C1063	K22170210	CAP	Chip	CH	50WV	9pF		
R1099	J24205182	RES	Chip	10W 1.8K ohm	C1064	K22170210	CAP	Chip	CH	50WV	9pF		
R1100	J24205182	RES	Chip	10W 1.8K ohm	C1065	K22170210	CAP	Chip	CH	50WV	9pF		
R1101	J24205182	RES	Chip	10W 1.8K ohm	C1066	K22170210	CAP	Chip	CH	50WV	9pF		
R1102	J24205182	RES	Chip	10W 1.8K ohm	C1067	K22170210	CAP	Chip	CH	50WV	9pF		
R1103	J24205182	RES	Chip	10W 1.8K ohm	C1068	K22170210	CAP	Chip	CH	50WV	9pF		
R1104	J24205182	RES	Chip	10W 1.8K ohm	C1069	K22170210	CAP	Chip	CH	50WV	9pF		
R1105	J24205182	RES	Chip	10W 1.8K ohm	C1070	K22170210	CAP	Chip	CH	50WV	9pF		
R1106	J24205182	RES	Chip	10W 1.8K ohm	C1071	K22170210	CAP	Chip	CH	50WV	9pF		
R1107	J24205182	RES	Chip	10W 1.8K ohm	C1072	K22170210	CAP	Chip	CH	50WV	9pF		
R1108	J24205182	RES	Chip	10W 1.8K ohm	C1073	K22170210	CAP	Chip	CH	50WV	9pF		
R1109	J24205182	RES	Chip	10W 1.8K ohm	C1074	K22170210	CAP	Chip	CH	50WV	9pF		
R1110	J24205182	RES	Chip	10W 1.8K ohm	C1075	K22170210	CAP	Chip	CH	50WV	9pF		
R1111	J24205182	RES	Chip	10W 1.8K ohm	C1076	K22170210	CAP	Chip	CH	50WV	9pF		
R1112	J24205182	RES	Chip	10W 1.8K ohm	C1077	K22170210	CAP	Chip	CH	50WV	9pF		
R1113	J24205182	RES	Chip	10W 1.8K ohm	C1078	K22170210	CAP	Chip	CH	50WV	9pF		
R1114	J24205182	RES	Chip	10W 1.8K ohm	C1079	K22170210	CAP	Chip	CH	50WV	9pF		
R1115	J24205182	RES	Chip	10W 1.8K ohm	C1080	K22170210	CAP	Chip	CH	50WV	9pF		
C1001	K22170235	CAP	Chip	CH	50WV	100pF	C1081	K70167104	CAP	Chip	CH	35WV	0.1uF
C1002	K22170235	CAP	Chip	CH	50WV	100pF	C1082	K70167104	CAP	Chip	CH	35WV	0.1uF
C1003	K22170235	CAP	Chip	CH	50WV	100pF	C1083	K70167104	CAP	Chip	CH	35WV	0.1uF
C1004	K22170235	CAP	Chip	CH	50WV	100pF	C1084	K70167104	CAP	Chip	CH	35WV	0.1uF
C1005	K22170235	CAP	Chip	CH	50WV	100pF	C1085	K70167104	CAP	Chip	CH	35WV	0.1uF
C1006	K22170235	CAP	Chip	CH	50WV	100pF	C1086	K70167104	CAP	Chip	CH	35WV	0.1uF
C1007	K22170235	CAP	Chip	CH	50WV	100pF	C1087	K70167104	CAP	Chip	CH	35WV	0.1uF
C1008	K22170235	CAP	Chip	CH	50WV	100pF	C1088	K70167104	CAP	Chip	CH	35WV	0.1uF
C1009	K22170235	CAP	Chip	CH	50WV	100pF	C1089	K70167104	CAP	Chip	CH	35WV	0.1uF
C1010	K22170235	CAP	Chip	CH	50WV	100pF	C1090	K70167104	CAP	Chip	CH	35WV	0.1uF
C1011	K22170235	CAP	Chip	CH	50WV	100pF	C1091	K70167104	CAP	Chip	CH	35WV	0.1uF
C1012	K22170235	CAP	Chip	CH	50WV	100pF	C1092	K70167104	CAP	Chip	CH	35WV	0.1uF
C1013	K22170235	CAP	Chip	CH	50WV	100pF	C1093	K70167104	CAP	Chip	CH	35WV	0.1uF
C1014	K22170235	CAP	Chip	CH	50WV	100pF	C1094	K22170210	CAP	Chip	CH	50WV	9pF
C1015	K22170235	CAP	Chip	CH	50WV	100pF	C1095	K22170210	CAP	Chip	CH	50WV	9pF
C1016	K22170235	CAP	Chip	CH	50WV	100pF	C1096	K22170210	CAP	Chip	CH	50WV	9pF
C1017	K22170235	CAP	Chip	CH	50WV	100pF	C1097	K22170210	CAP	Chip	CH	50WV	9pF
C1018	K22170235	CAP	Chip	CH	50WV	100pF	C1098	K22170235	CAP	Chip	CH	50WV	9pF
C1019	K22170235	CAP	Chip	CH	50WV	100pF	C1099	K22170235	CAP	Chip	CH	50WV	9pF
C1020	K22170235	CAP	Chip	CH	50WV	100pF	C1100	K22170235	CAP	Chip	CH	50WV	9pF
C1021	K22170235	CAP	Chip	CH	50WV	100pF	C1101	K22170235	CAP	Chip	CH	50WV	9pF
C1022	K22170235	CAP	Chip	CH	50WV	100pF	C1102	K22170235	CAP	Chip	CH	50WV	9pF
C1023	K22170235	CAP	Chip	CH	50WV	100pF	C1103	K22170235	CAP	Chip	CH	50WV	9pF
C1024	K22170235	CAP	Chip	CH	50WV	100pF	C1104	K22170235	CAP	Chip	CH	50WV	9pF
C1025	K22170235	CAP	Chip	CH	50WV	100pF	C1105	K22170235	CAP	Chip	CH	50WV	9pF
C1026	K22170235	CAP	Chip	CH	50WV	100pF	C1106	K22170235	CAP	Chip	CH	50WV	9pF
C1027	K22170235	CAP	Chip	CH	50WV	100pF	C1107	K22170235	CAP	Chip	CH	50WV	9pF
C1028	K22170235	CAP	Chip	CH	50WV	100pF	C1108	K22170235	CAP	Chip	CH	50WV	9pF
C1029	K22170235	CAP	Chip	CH	50WV	100pF	C1109	K22170235	CAP	Chip	CH	50WV	9pF
C1030	K22170235	CAP	Chip	CH	50WV	100pF	C1110	K22170235	CAP	Chip	CH	50WV	9pF
C1031	K22170235	CAP	Chip	CH	50WV	100pF	C1111	K22170235	CAP	Chip	CH	50WV	9pF
C1032	K22170235	CAP	Chip	CH	50WV	100pF	C1112	K22170235	CAP	Chip	CH	50WV	9pF
C1033	K22170235	CAP	Chip	CH	50WV	100pF	C1113	K22170235	CAP	Chip	CH	50WV	9pF
C1034	K22170235	CAP	Chip	CH	50WV	100pF	C1114	K22170235	CAP	Chip	CH	50WV	9pF
C1035	K22170235	CAP	Chip	CH	50WV	100pF	C1115	K22170235	CAP	Chip	CH	50WV	9pF
C1036	K22170235	CAP	Chip	CH	50WV	100pF	C1116	K22170235	CAP	Chip	CH	50WV	9pF
C1037	K22170235	CAP	Chip	CH	50WV	100pF	C1117	K22170235	CAP	Chip	CH	50WV	9pF
C1038	K22170235	CAP	Chip	CH	50WV	100pF	C1118	K22170235	CAP	Chip	CH	50WV	9pF
C1039	K22170235	CAP	Chip	CH	50WV	100pF	C1119	K22170235	CAP	Chip	CH	50WV	9pF
C1040	K22170235	CAP	Chip	CH	50WV	100pF	C1120	K22170235	CAP	Chip	CH	50WV	9pF
C1041	K22170235	CAP	Chip	CH	50WV	100pF	C1121	K22170235	CAP	Chip	CH	50WV	9pF
C1042	K22170235	CAP	Chip	CH	50WV	100pF	C1122	K22170235	CAP	Chip	CH	50WV	9pF
C1043	K22170235	CAP	Chip	CH	50WV	100pF	C1123	K22170235	CAP	Chip	CH	50WV	9pF
C1044	K22170235	CAP	Chip	CH	50WV	100pF	C1124	K22170235	CAP	Chip	CH	50WV	9pF
C1045	K22170235	CAP	Chip	CH	50WV	100pF	C1125	K22170235	CAP	Chip	CH	50WV	9pF
C1046	K22170235	CAP	Chip	CH	50WV	100pF	C1126	K22170235	CAP	Chip	CH	50WV	9pF
C1047	K22170235	CAP	Chip	CH	50WV	100pF	C1127	K22170235	CAP	Chip	CH	50WV	9pF
C1048	K22170235	CAP	Chip	CH	50WV	100pF	C1128	K22170235	CAP	Chip	CH	50WV	9pF
C1049	K22170235	CAP	Chip	CH	50WV	100pF	C1129	K22170235	CAP	Chip	CH	50WV	9pF
C1050	K22170235	CAP	Chip	CH	50WV	100pF	C1130	K22170235	CAP	Chip	CH	50WV	9pF
C1051	K22170235	CAP	Chip	CH	50WV	100pF	C1131	K22170235	CAP	Chip	CH	50WV	9pF
C1052	K22170235	CAP	Chip	CH	50WV	100pF	C1132	K22170235	CAP	Chip	CH	50WV	9pF
C1053	K22170235	CAP	Chip	CH	50WV	100pF	C1133	K22170235	CAP	Chip	CH	50WV	9pF
C1054	K22170235	CAP	Chip	CH	50WV	100pF	C1134	K22170235	CAP	Chip	CH	50WV	9pF
C1055	K22170235	CAP	Chip	CH	50WV	100pF	C1135	K22170235	CAP	Chip	CH	50WV	9pF
C1056	K22170235	CAP	Chip	CH	50WV	100pF	C1136	K22170235	CAP	Chip	CH	50WV	9pF
C1057	K22170235	CAP	Chip	CH	50WV	100pF	C1137	K22170235	CAP	Chip	CH	50WV	9pF
C1058	K22170235	CAP	Chip	CH	50WV	100pF	C1138	K22170235	CAP	Chip	CH	50WV	9pF
C1059	K22170235	CAP	Chip	CH	50WV	100pF	C1139	K22170235	CAP	Chip	CH	50WV	9pF
C1060	K22170235	CAP	Chip	CH	50WV	100pF	C1140	K22170235	CAP	Chip	CH	50WV	9pF
C1061	K22170235	CAP	Chip	CH	50WV	100pF	C1141	K22170235	CAP	Chip	CH	50WV	9pF
C1062	K22170235	CAP	Chip	CH	50WV	100pF	C1142	K22170235	CAP	Chip	CH	50WV	9pF
C1063	K22170235	CAP	Chip	CH	50WV	100pF	C1143	K22170235	CAP	Chip	CH	50WV	9pF
C1064	K22170235	CAP	Chip	CH	50WV	100pF	C1144	K22170235	CAP	Chip	CH	50WV	9pF
C1065	K22170235	CAP	Chip	CH	50WV	100pF	C1145	K22170235	CAP	Chip	CH	50WV	9pF
C1066	K22170235	CAP	Chip	CH	50WV	100pF	C1146	K22170235	CAP	Chip	CH	50WV	9pF
C1067	K22170235	CAP	Chip	CH	50WV	100pF	C1147	K22170235	CAP	Chip	CH	50WV	9pF
C1068	K22170235	CAP	Chip	CH	50WV	100pF	C1148	K22170235	CAP	Chip	CH	50WV	9pF
C1069	K22170235	CAP	Chip	CH	50WV	100pF	C1149	K22170235	CAP	Chip	CH	50WV	9pF
C1070	K22170235	CAP	Chip	CH	50WV	100pF	C1150	K22170235	CAP	Chip	CH	50WV	9pF
C1071	K22170235	CAP	Chip	CH	50WV	100pF	C1151	K22170235	CAP	Chip	CH	50WV	9pF
C1072	K22170235	CAP	Chip	CH	50WV	100pF	C1152	K22170235	CAP	Chip	CH	50WV	9pF
C1073	K22170235	CAP	Chip	CH	50WV	100pF	C1153	K22170235	CAP	Chip	CH	50WV	9pF
C1074	K22170235	CAP	Chip	CH	50WV	100pF	C1154	K22170235	CAP	Chip	CH	50WV	9pF
C1075	K22170235	CAP	Chip	CH	50WV	100pF	C1155	K22170235	CAP	Chip	CH	50WV	9pF
C1076	K22170235	CAP	Chip	CH	50WV	100pF	C1156	K22170235	CAP	Chip	CH	50WV	9pF
C1077	K22170235	CAP	Chip	CH	50WV	100pF	C1157	K22170235	CAP	Chip	CH	50WV	9pF
C1078	K22170235	CAP	Chip	CH	50WV	100pF	C1158	K22170235	CAP	Chip	CH	50WV	9pF
C1079	K22170235												

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RESISTOR PARTS LIST

R2008	J01225272	Carbon Film RES.	1/6W 2.7k ohm	PJ	R2095	J24205433	RES. Chip	1/10W 22k ohm	
R2009	J24205450	RES. Chip	1/10W 15 ohm		R2100	J01225404	Carbon Film RES	1/6W 100k ohm	PJ
R2010	J24205401	RES. Chip	1/10W 100 ohm		R2101	J01225470	Carbon Film RES	1/6W 47k ohm	
R2011	J24205473	RES. Chip	1/10W 47k ohm		R2102	J24205473	RES. Chip	1/10W 22k ohm	
R2012	J01225453	Carbon Film RES	1/6W 10k ohm	PJ	R2103	J24205470	RES. Chip	1/10W 47k ohm	
R2013	J24205470	RES. Chip	1/10W 47k ohm						
R2014	J01225471	Carbon Film RES.	1/6W 470 ohm	PJ	VR2001	J51747104	POT.	B	100k ohm
R2015	J24205401	RES. Chip	1/10W 100 ohm		VR2002	J51745473	POT.	B	47k ohm
R2016	J24205680	RES. Chip	1/10W 68 ohm		VR2003	J51745224	POT.	B	220k ohm
R2017	J24205101	RES. Chip	1/10W 100 ohm		VR2004	J51745471	POT.	B	470 ohm
R2018	J24205331	RES. Chip	1/10W 330 ohm		VR2005	J51745101	POT.	B	100 ohm
R2019	J24205471	RES. Chip	1/10W 470 ohm		VR2006	J51745222	POT.	B	2.2k ohm
R2020	J24205473	RES. Chip	1/10W 47k ohm						
R2021	J24205225	RES. Chip	1/10W 2.2M ohm		C2001	K22170215	CAP. Chip	CH	50WV 15pF
R2022	J24205470	RES. Chip	1/10W 47k ohm		C2002	K22170209	CAP. Chip	CH	50WV 8pF
R2023	J24205470	RES. Chip	1/10W 1k ohm		C2003	K22170206	CAP. Chip	CH	50WV 5pF
R2024	J24205560	RES. Chip	1/10W 56 ohm		C2004	K22170235	CAP. Chip	CH	50WV 100pF
R2025	J24205222	RES. Chip	1/10W 2.2k ohm		C2005	K22170245	CAP. Chip	CH	50WV 100pF
R2026	J24205222	RES. Chip	1/10W 2.2k ohm		C2006	K22170211	CAP. Chip	CH	50WV 10pF
R2027	J24205402	RES. Chip	1/10W 1k ohm		C2007	K22170205	CAP. Chip	B	50WV 0.001uF
R2028	J24205103	RES. Chip	1/10W 10k ohm		C2008	K22170211	CAP. Chip	CH	50WV 10pF
R2029	J24205102	RES. Chip	1/10W 1k ohm		C2009	K22170205	CAP. Chip	B	50WV 0.001uF
R2030	J24205112	RES. Chip	1/10W 2.2k ohm		C2010	K22170204	CAP. Chip	CH	50WV 3pF
R2031	J24205431	RES. Chip	1/10W 330 ohm		C2011	K22170235	CAP. Chip	CH	50WV 10pF
R2032	J24205430	RES. Chip	1/10W 18 ohm		C2012	K22170235	CAP. Chip	CH	50WV 100pF
R2033	J24205430	RES. Chip	1/10W 18 ohm		C2013	K22170235	CAP. Chip	CH	50WV 10pF
R2034	J24205331	RES. Chip	1/10W 330 ohm		C2014	K22170211	CAP. Chip	CH	50WV 10pF
R2035	J24205180	RES. Chip	1/10W 18 ohm		C2015	K22170235	CAP. Chip	B	50WV 0.001uF
R2036	J24205331	RES. Chip	1/10W 330 ohm		C2016	K22170235	CAP. Chip	CH	50WV 2pF
R2037	J24205220	RES. Chip	1/10W 22 ohm		C2017	K22170235	CAP. Chip	CH	50WV 8pF
R2038	J24206330	Metall Film RES.	1W 33 ohm		C2018	K22170235	CAP. Chip	CH	50WV 0.5pF
R2039	J24205103	RES. Chip	1/10W 10k ohm		C2019	K22170235	CAP. Chip	CH	50WV 100pF
R2040	J24205401	RES. Chip	1/10W 100 ohm		C2020	K22170235	CAP. Chip	B	50WV 0.001uF
R2041	J24205103	RES. Chip	1/10W 10k ohm		C2021	K22170235	CAP. Chip	CH	50WV 0.001uF
R2042	J24205473	RES. Chip	1/10W 47k ohm		C2022	K22170235	CAP. Chip	CH	50WV 0.001uF
R2043	J24205473	RES. Chip	1/10W 47k ohm		C2023	K22170235	CAP. Chip	CH	50WV 10pF
R2044	J24205473	RES. Chip	1/10W 47k ohm		C2024	K22170235	CAP. Chip	B	50WV 0.001uF
R2045	J24205104	RES. Chip	1/10W 100k ohm		C2025	K22170235	CAP. Chip	CH	50WV 1pF
R2046	J24205103	RES. Chip	1/10W 10k ohm		C2026	K22170235	CAP. Chip	B	50WV 0.001uF
R2047	J24205223	RES. Chip	1/10W 2.2k ohm		C2027	K22170235	CAP. Chip	CH	50WV 22pF
R2048	J24205473	RES. Chip	1/10W 47k ohm		C2028	K22170235	CAP. Chip	CH	50WV 8pF
R2049	J24205474	RES. Chip	1/10W 47k ohm		C2029	K22170235	CAP. Chip	B	50WV 0.001uF
R2050	J24205221	RES. Chip	1/10W 220 ohm		C2030	K22170817	CAP. Chip	B	50WV 0.001uF
R2051	J24205181	RES. Chip	1/10W 680 ohm		C2031	K22170805	CAP. Chip	B	50WV 0.001uF
R2052	J24205102	RES. Chip	1/10W 1k ohm		C2032	K22170805	CAP. Chip	B	50WV 0.001uF
R2053	J24205401	RES. Chip	1/10W 10k ohm		C2033	K22170805	CAP. Chip	B	50WV 0.001uF
R2054	J24205222	RES. Chip	1/10W 2.2k ohm		C2034	K22170805	CAP. Chip	CH	50WV 8pF
R2055	J24205471	Carbon Film RES.	1/6W 470 ohm	UJ	C2035	K22170817	CAP. Chip	B	50WV 0.001uF
R2056	J24205660	RES. Chip	1/10W 56 ohm		C2036	K22170817	CAP. Chip	B	50WV 0.001uF
R2057	J24205473	RES. Chip	1/10W 47k ohm		C2037	K22170817	CAP. Chip	B	50WV 0.001uF
R2058	J24205470	RES. Chip	1/10W 47k ohm		C2038	K22170817	CAP. Chip	CH	50WV 12pF
R2059	J24205332	RES. Chip	1/10W 330 ohm		C2039	K22170211	CAP. Chip	CH	50WV 10pF
R2060	J24205403	RES. Chip	1/10W 10k ohm		C2040	K22170211	CAP. Chip	CH	50WV 1pF
R2061	J24205403	RES. Chip	1/10W 10k ohm		C2041	K22170211	CAP. Chip	CH	50WV 10pF
R2062	J24205400	RES. Chip	1/10W 10k ohm		C2042	K22170817	CAP. Chip	CH	50WV 2pF
R2063	J24205400	RES. Chip	1/10W 39 ohm		C2043	K22170817	CAP. Chip	CH	50WV 4pF
R2064	J24205401	RES. Chip	1/10W 330 ohm		C2044	K22170817	CAP. Chip	B	50WV 0.001uF
R2065	J01225660	Carbon Film RES.	1/6W 56 ohm	UJ	C2045	K22170817	CAP. Chip	B	50WV 0.001uF
R2066	J24205401	RES. Chip	1/10W 100 ohm		C2046	K22170817	CAP. Chip	B	50WV 0.001uF
R2067	J24205471	RES. Chip	1/10W 470 ohm		C2047	K22170817	CAP. Chip	B	50WV 0.001uF
R2068	J24205471	RES. Chip	1/10W 470 ohm		C2048	K22170817	CAP. Chip	B	50WV 0.001uF
R2069	J24205479	RES. Chip	1/10W 47k ohm		C2049	K22170817	CAP. Electro.		16WV 10uF
R2070	J24205474	RES. Chip	1/10W 47k ohm						
R2071	J24205474	RES. Chip	1/10W 47k ohm		C2050	K22170817	CAP. Chip	B	50WV 0.001uF
P2072	J24205473	RES. Chip	1/10W 47k ohm		C2051	K22170817	CAP. Chip	B	50WV 0.001uF
R2073	J24205102	RES. Chip	1/10W 1k ohm		C2052	K22170805	CAP. Chip	B	50WV 0.001uF
R2075	J01225404	Carbon Film RES	1/6W 100 ohm	PJ	C2053	K22170805	CAP. Chip	B	50WV 0.001uF
R2076	J24205401	RES. Chip	1/10W 100 ohm		C2054	K22170805	CAP. Chip	B	50WV 0.001uF
R2077	J24205400	RES. Chip	1/10W 68 ohm		C2055	K22170805	CAP. Chip	B	50WV 0.001uF
R2078	J24205400	RES. Chip	1/10W 33 ohm		C2056	K22170805	CAP. Chip	B	50WV 0.001uF
R2079	J24205401	RES. Chip	1/10W 180 ohm		C2057	K22170817	CAP. Chip	CH	50WV 47pF
R2080	J24205681	RES. Chip	1/10W 680 ohm		C2058	K22170817	CAP. Chip	CH	50WV 47pF
R2081	J24205689	RES. Chip	1/10W 68 ohm		C2059	K22170805	CAP. Chip	B	50WV 0.001uF
R2082	J24205681	RES. Chip	1/10W 680 ohm		C2060	K22170817	CAP. Chip	B	50WV 0.001uF
R2083	J24205681	RES. Chip	1/10W 330 ohm		C2061	K22170817	CAP. Chip	B	50WV 0.001uF
R2084	J24205272	RES. Chip	1/10W 2.7k ohm		C2062	K22170817	CAP. Chip	CH	50WV 7pF
R2085	J24205101	RES. Chip	1/10W 100 ohm		C2063	K22170817	CAP. Chip	B	50WV 0.001uF
R2086	J24205222	RES. Chip	1/10W 2.2k ohm		C2064	K22170817	CAP. Chip	B	50WV 0.001uF
R2087	J24205471	RES. Chip	1/10W 470 ohm		C2065	K22170213	CAP. Chip	CH	50WV 12pF
R2088	J24205103	RES. Chip	1/10W 10k ohm		C2066	K22170805	CAP. Chip	B	50WV 0.001uF
R2089	J24205151	RES. Chip	1/10W 150 ohm		C2067	K22170207	CAP. Chip	CH	50WV 8pF
R2090	J20306221	Metall Film RES	1W 220 ohm		C2068	K22170817	CAP. Chip	B	50WV 0.001uF
R2091	J24205103	RES. Chip	1/10W 10k ohm		C2069	K22170817	CAP. Chip	B	50WV 0.001uF
R2092	J24205402	RES. Chip	1/10W 1k ohm		C2070	K22170817	CAP. Chip	B	50WV 0.001uF
R2093	J24205689	RES. Chip	1/10W 68 ohm		C2071	K22170817	CAP. Chip	B	50WV 0.001uF
R2094	J24205102	RES. Chip	1/10W 1k ohm		C2072	K22170817	CAP. Chip	B	50WV 0.001uF
					C2073	K22170817	CAP. Chip	B	50WV 0.001uF

PARTS LIST 'FENJIAN 2'

C2024	K22170812	CAP Chip	B	50WV	0.01uF	L1005	L1190148	M RFC	10uH
C2075	K22170817	CAP Chip	B	50WV	0.01uF	L1005	L1190149	M RFC	1uH
C2076	K22170817	CAP Chip	CH	50WV	10pF	L1005	L1190149	M RFC	1uH
C2077	K22170817	CAP Chip	B	50WV	0.01uF	L1005	L1190149	M RFC	1uH
C2078	K22170819	CAP Chip	CH	50WV	22pF	L1005	L1190149	M RFC	1uH
C2079	K22170817	CAP Chip	B	50WV	0.01uF	L1005	L1190149	M RFC	1uH
C2080	K22170819	CAP Chip	CH	50WV	22pF	L1005	L1190149	M RFC	1uH
C2081	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2082	K22170215	CAP Chip	CH	50WV	15pF	L1005	L1190149	M RFC	1uH
C2083	K22170211	CAP Chip	CH	50WV	10pF	L1005	L1190149	M RFC	1uH
C2084	K22170206	CAP Chip	CH	50WV	5pF	L1005	L1190149	M RFC	1uH
C2085	K22170206	CAP Chip	CH	50WV	6pF	L1005	L1190149	M RFC	1uH
C2086	K22170206	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2087	K22170817	CAP Chip	B	50WV	0.01uF	L1005	L1190149	M RFC	1uH
C2088	K22170817	CAP Chip	B	50WV	0.01uF	L1005	L1190149	M RFC	1uH
C2089	K22170817	CAP Chip	B	50WV	0.01uF	L1005	L1190149	M RFC	1uH
C2090	K22170817	CAP Chip	CH	50WV	10pF	L1005	L1190149	M RFC	1uH
C2091	K22170817	CAP Chip	B	50WV	0.01uF	L1005	L1190149	M RFC	1uH
C2092	K22170817	CAP Chip	B	50WV	0.01uF	L1005	L1190149	M RFC	1uH
C2093	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2094	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2095	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2096	K22170805	CAP Chip	CH	50WV	22pF	L1005	L1190149	M RFC	1uH
C2097	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2098	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2099	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2100	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2101	K22170805	CAP Chip	CH	50WV	3pF	L1005	L1190149	M RFC	1uH
C2102	K22170805	CAP Chip	CH	50WV	3pF	L1005	L1190149	M RFC	1uH
C2103	K22170805	CAP Chip	CH	50WV	15pF	L1005	L1190149	M RFC	1uH
C2105	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2106	K22170805	CAP Chip	CH	50WV	6pF	L1005	L1190149	M RFC	1uH
C2107	K22170805	CAP Chip	CH	50WV	6pF	L1005	L1190149	M RFC	1uH
C2108	K22170805	CAP Chip	CH	50WV	15pF	L1005	L1190149	M RFC	1uH
C2110	K40129004	AL Electro. CAP		16WV	10uF	L1005	L1190149	M RFC	1uH
C2111	K40129004	AL Electro. CAP		16WV	10uF	L1005	L1190149	M RFC	1uH
C2112	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2113	K40129004	AL Electro. CAP		16WV	10uF	L1005	L1190149	M RFC	1uH
C2114	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2115	K22170805	CAP Chip	B	25WV	0.1uF	L1005	L1190149	M RFC	1uH
C2116	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2117	K40129004	AL Electro. CAP		16WV	10uF	L1005	L1190149	M RFC	1uH
C2118	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2119	K22170805	CAP Chip	B	25WV	0.1uF	L1005	L1190149	M RFC	1uH
C2120	K40129004	AL Electro. CAP		16WV	10uF	L1005	L1190149	M RFC	1uH
C2121	K22170805	CAP Chip	B	25WV	0.1uF	L1005	L1190149	M RFC	1uH
C2122	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2123	K40129004	AL Electro. CAP		16WV	10uF	L1005	L1190149	M RFC	1uH
C2124	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2125	K22170211	CAP Chip	CH	50WV	22pF	L1005	L1190149	M RFC	1uH
C2126	K22170805	CAP Chip	B	50WV	0.001uF	L1005	L1190149	M RFC	1uH
C2127	K22170805	CAP Chip	B	25WV	0.1uF	L1005	L1190149	M RFC	1uH
C2128	K22170202	CAP Chip	CH	50WV	1pF	L1005	L1190149	M RFC	1uH
C2129	K22170202	CAP Chip	CH	50WV	0.5pF	L1005	L1190149	M RFC	1uH
C2130	K22170202	CAP Chip	CH	50WV	0.5pF	L1005	L1190149	M RFC	1uH
C2131	K22170202	CAP Chip	CH	50WV	0.5pF	L1005	L1190149	M RFC	1uH
C2132	K22170211	CAP Chip	CH	50WV	10pF	L1005	L1190149	M RFC	1uH
TC2001	K91000104	Variable CAP.		3pF		L1005	L1190149	M RFC	1uH
T2001	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2002	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2003	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2004	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2005	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2006	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2007	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2008	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2009	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2010	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2011	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2012	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2013	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2014	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2015	L0020907	Coil				L1005	L1190149	M RFC	1uH
T2016	L0020907	Coil				L1005	L1190149	M RFC	1uH
L2001	L1190149	M RFC		1uH		L1005	L1190149	M RFC	1uH
L2002	L1190148	M RFC		10uH		L1005	L1190149	M RFC	1uH
L2003	L1020693A	RFC				L1005	L1190149	M RFC	1uH
L2004	L1190149	M RFC		1uH		L1005	L1190149	M RFC	1uH

REL-705-1-1 PARTS LIST

C3026	K21170002	Feed Through CAP.	50WV 0.001uF
C3027	K22170201	CAP. Chip	CH 50WV 0.5pF
C3028	K22170201	CAP. Chip	CH 50WV 0.5pF
C3029	K02172059	Ceramic CAP	CK 50WV 0.5pF
L3001	L0020678	Coil	
P3001	P1090209	Connector	
JP3001	T9205537	Wire ASSY	
RL3001	M1190042	Relay	G4Y 152P
	L9190001	Ferrite Beads	
	Q5000036	TP-G	MK 1095
	T9317823	Wire ASSY	
	T9317800A	Wire ASSY	
	T9317822	Wire ASSY	
	R4083840B	Booster HeatSink	
	R0511080A	Shield Cover PA	
	R0124500	Shield Plate PA	
	R7043900	Insulator Board B	



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(7)

C115

FT-736R (FP1274A)

S63-07-21

FT-736R (FP1274A)

POWER SUPPLY UNIT

F2918000 Printed Circuit Board (FP1274A-051R4)

Q01	G3309450	Transistor	2SC945	
Q02	G3106840	Transistor	2SA684	
Q03	G3329250	Transistor	2SC2925	
Q04	G3335360	Transistor	2SC3536	
Q21	G3309450	Transistor	2SC945	
SCR21	G3090083	Thyristor	5P4M	
PC01	G0090006	Photo Coupler	PC817	
D01	G2090399	Diode	RBV406	
D02	G2009530	Diode	1S953	
D03	G2090400	Diode	10DF2	
D04	G2090401	Diode	RG1C	
D05	G2090402	Diode	EG-1	
D06	G2090400	Diode	10DF2	
D07	G2009530	Diode	1S953	
D08	G2090304	Diode	S5500G	
D09	G2009530	Diode	1S953	
D21	G2090403	Diode	CTL22S	
ZD01	G2090404	Diode	RD100E	
ZD21	G2090405	Diode	HZ7-C1	
ZD22	G2090406	Diode	HZ15-2	
R01	G9090038	Thermistor	5D-11	
R02	G9090038	Thermistor	5D-11	
R03	J00275244	Carbon Film Res.	240k Ohm	1/4W
R04	J00275244	Carbon Film Res.	240k Ohm	1/4W
R05	J00275244	Carbon Film Res.	240k Ohm	1/4W
R06	J00245270	Carbon Film Res.	27 Ohm	1/4W
R07	J00245470	Carbon Film Res.	47 Ohm	1/4W
R08	J20359002	Metallic Film Res.	100 Ohm	3W
R09	J20359002	Metallic Film Res.	100 Ohm	3W
R10	J00245229	Carbon Film Res.	2.2 Ohm	1/4W
R11	J00245472	Carbon Film Res.	47k Ohm	1/4W
R12	J00245752	Carbon Film Res.	7.5k Ohm	1/4W
R14	J00245101	Carbon Film Res.	2k Ohm	1/4W
R15	J00245150	Carbon Film Res.	15 Ohm	1/4W
R16	J00245202	Carbon Film Res.	100 Ohm	1/4W
R17	J20339004	Metallic Film Res.	33 Ohm	2W
R18	J20339004	Metallic Film Res.	33 Ohm	2W
R19	J10335029	Cement Res.	0.22 Ohm	2W

ORIGINAL

3/4
(17)

FT-736R (FP1274A)

R21	J00245102	Carbon Film Res.	1k Ohm	1/4W
R22	J00245102	Carbon Film Res.	1k Ohm	1/4W
R23	J00245184	Carbon Film Res.	180k Ohm	1/4W
R24	J00245221	Carbon Film Res.	220 Ohm	1/4W
R25	J00245689	Carbon Film Res.	6.8 Ohm	1/4W
R26	J00245689	Carbon Film Res.	6.8 Ohm	1/4W
R27	J00245102	Carbon Film Res.	1k Ohm	1/4W
R28	J00245621	Carbon Film Res.	620 Ohm	1/4W
R29	J00245561	Carbon Film Res.	560 Ohm	1/4W
R30	J00245102	Carbon Film Res.	1k Ohm	1/4W
R31	J00245479	Carbon Film Res.	4.7 Ohm	1/4W

VR21 J51778501 Pot. EVN38CA00B52 500 Ohm

C01	K55280001	Metallized Paper Cap.	0.1uF	630V
C02	K12329002	Ceramic Cap.	0.0047uF	400V
C03	K12329002	Ceramic Cap.	0.0047uF	400V
C04	K55280001	Metallized Paper Cap.	0.1uF	630V
C05	K12269001	Ceramic Cap.	0.001uF	400V
C06	K40239003	Al. Electro Cap.	470uF	200V
C07	K40239003	Al. Electro Cap.	470uF	200V
C08	K40179037	Al. Electro Cap.	56uF	25V
C09	K40129056	Al. Electro Cap.	220uF	16V
C10	K12339002	Ceramic Cap.	0.001uF	2kV
C11	K55280002	Metallized Paper Cap.	0.01uF	630V
C12	K40179038	Al. Electro Cap.	1uF	50V
C13	K50177333	Mylar Film Cap.	0.033uF	50V
C14	K50170028	Mylar Film Cap.	0.1uF	50V
C21	K40149033	Al. Electro Cap.	1000uF	25V
C22	K40149033	Al. Electro Cap.	1000uF	25V
C23	K40179039	Al. Electro Cap.	0.47uF	50V
C24	K50177333	Mylar Film Cap.	0.033uF	50V
C25	K40179038	Al. Electro Cap.	1uF	50V
C26	K40169021	Al. Electro Cap.	580uF	35V
C27	K55280002	Metallized Paper Cap.	0.01uF	630V

T01 L2190025 Converter Transformer FL15913

L01 L2190026 Noise Filter LF0049CE
 L02 L2190027 Choke Coil 3508-103
 L21 L2190028 Choke Coil FL1476A

S8000037 Heatsink
 S8000038 Hanger
 S8000031 Transformer Holder
 S8000039 Insulator Sheet



BAND MODULE INSTALLATION IN THE FT-736R

The FT-736R is supplied with the 144 MHz and 430 MHz band modules already installed in the two upper compartments. Up to two additional band modules may also be installed, in the lower compartments.

Note in the following diagram that the 1.2 GHz module may be installed only in the lower left corner (when viewed from the rear). The 50 and 220 MHz modules may be installed in either of the lower compartments.

- (1) Remove all connections from the jacks on the rear panel, and then remove the two screws in the carrying handle and the eight screws affixing the top and bottom covers. Remove the handle and covers, and place the transceiver upside-down on the workbench.
- (2) Locate the gray rubber thermal pad supplied with the Band Module, and the four machine screws. After confirming the correct location for the Module, insert the machine screws from the rear through the four holes in the heatsink and then through the holes in the thermal sheet.
- (3) Carefully slide the Band Module into place so that the mounting feet on the Module fit into their slots in the chassis.

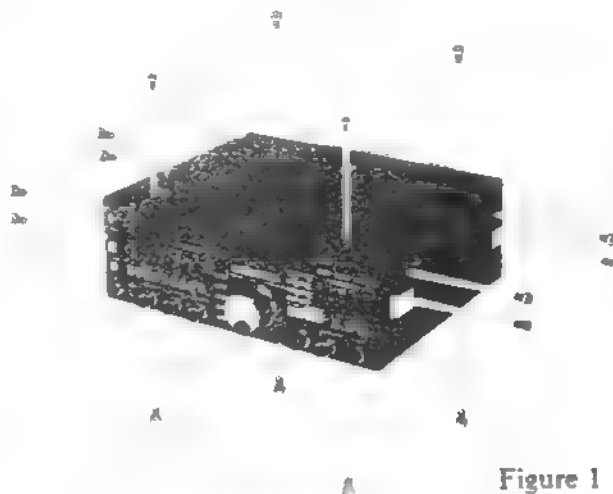


Figure 1

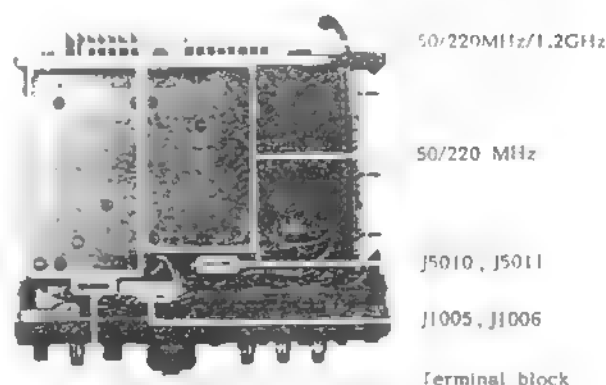


Figure 2

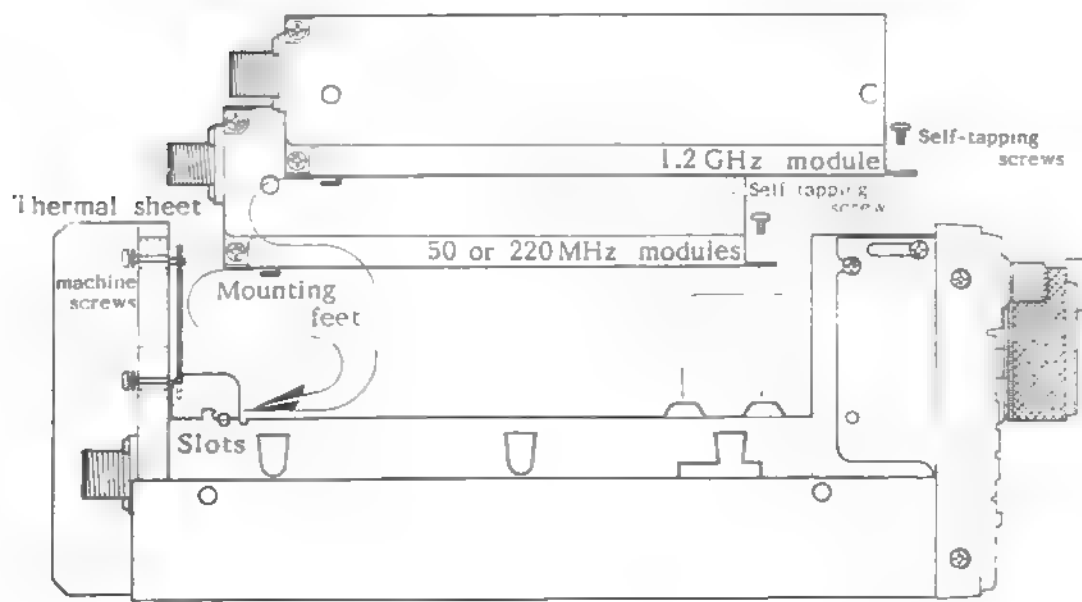


Figure 3

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- (4) Tighten the four machine screws, and install one self-tapping screw (for 50 or 220 MHz modules: two for the 1.2 GHz module) through the hole(s) near the front of the module into the chassis.
- (5) Loosen the two front panel mounting screws on each side, and fold the front panel upwards.
- (6) Connect the single red wire to either of the terminals on the terminal block.
- (7) Install the 13-pin plug into J5010 or J5011, and the 10-pin plug into J1005 or J1006. Make a note of which band modules are connected to J5010 and J5011. You will need this information when connecting a masthead preamp or an external power amplifier.
- (8) Fold the front panel back into place, tighten its screws, and replace the covers and carrying handle.

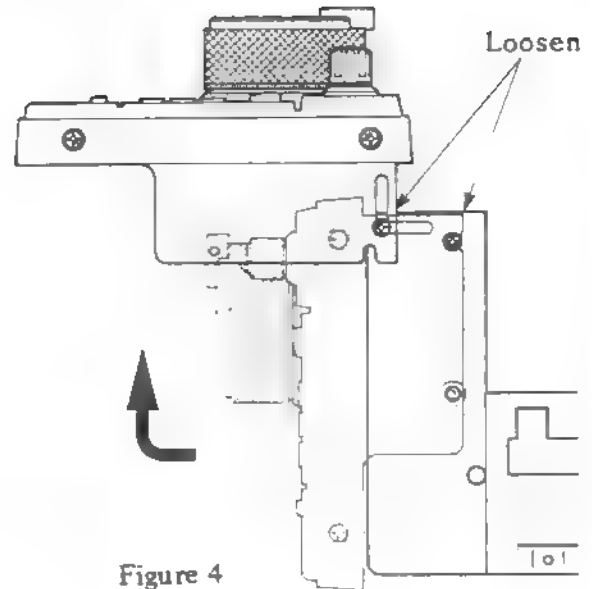


Figure 4

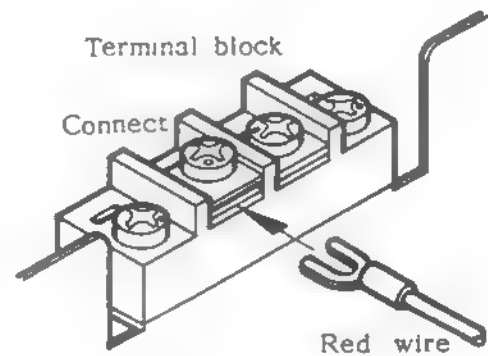


Figure 5

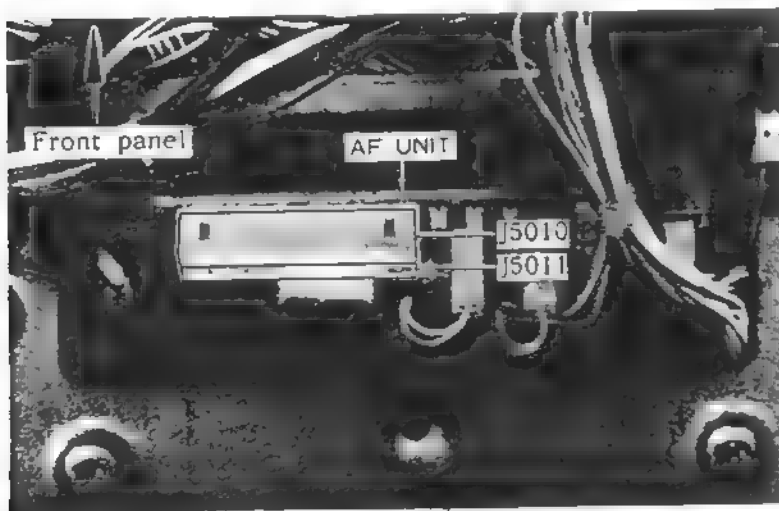


Figure 6

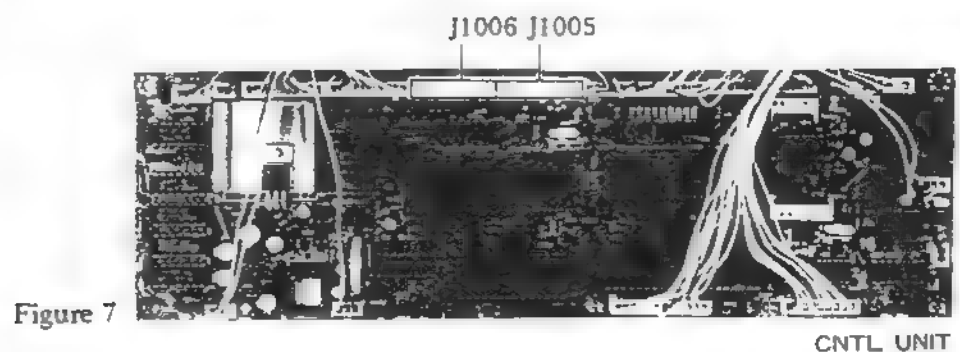


Figure 7

KEYER UNIT INSTALLATION IN THE FT-736R

- (1) Remove the eight screws affixing the top cover, and remove the cover.
- (2) Locate 8-pin connector P4001 on the TX Unit.

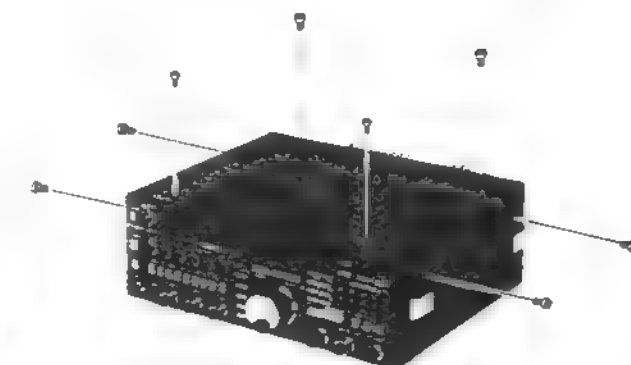
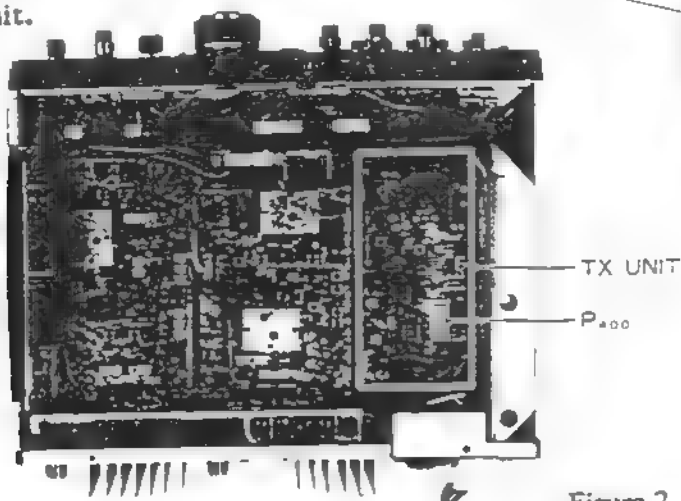


Figure 1

- (3) Cut the twisted jumper wire near P4001.

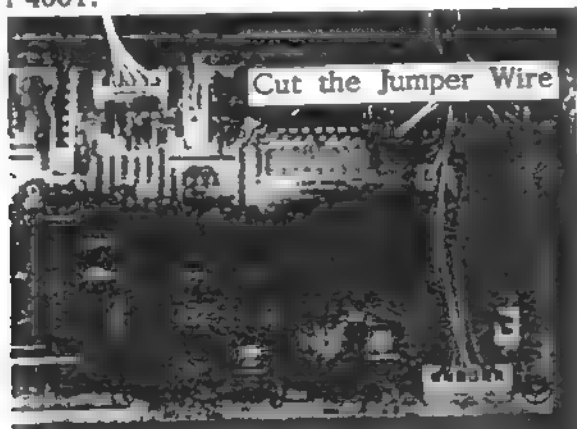


Figure 3

- (4) Insert the Keyer Unit into P4001.

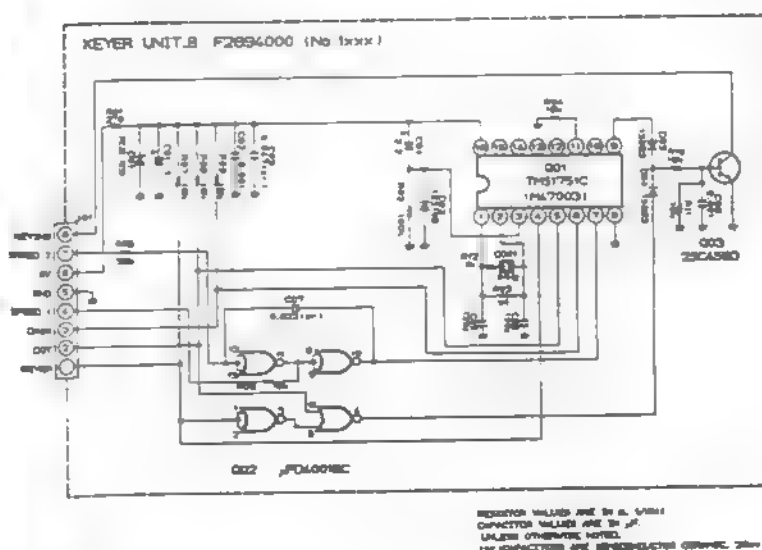
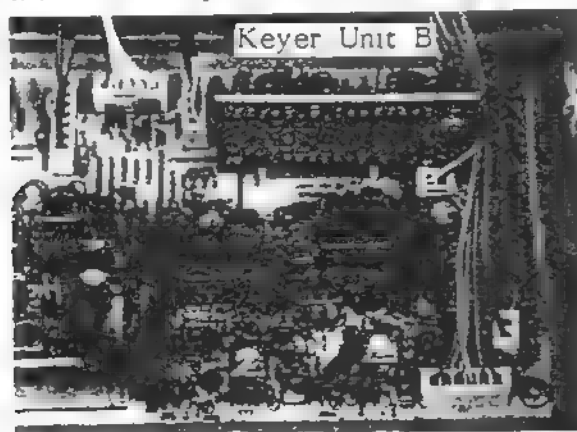


Figure 4

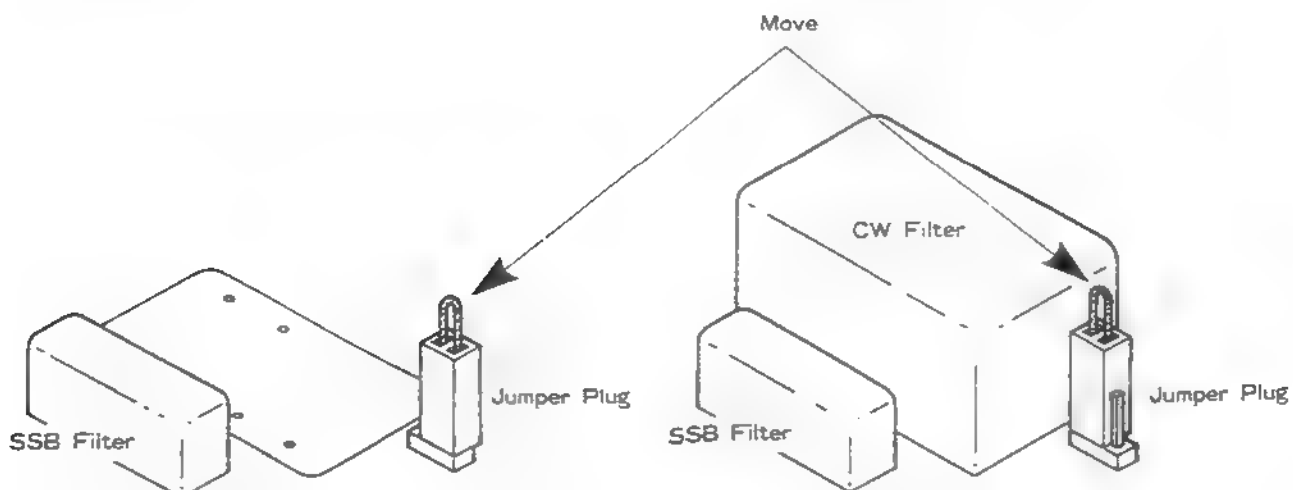
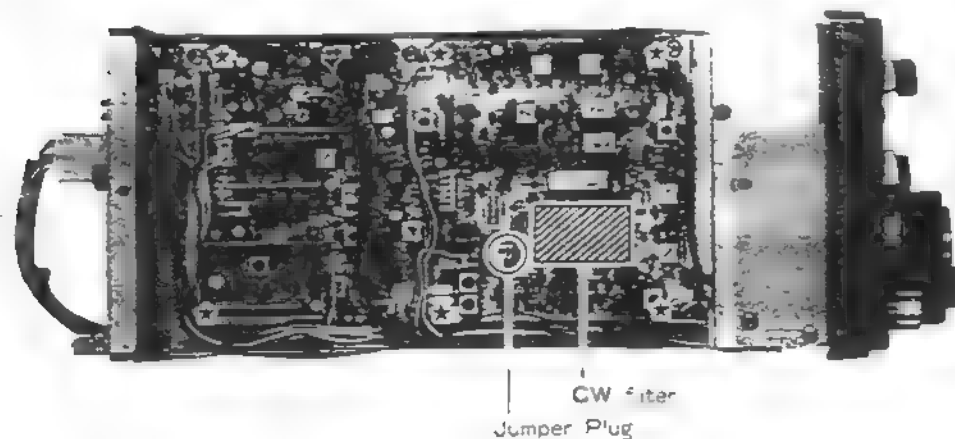
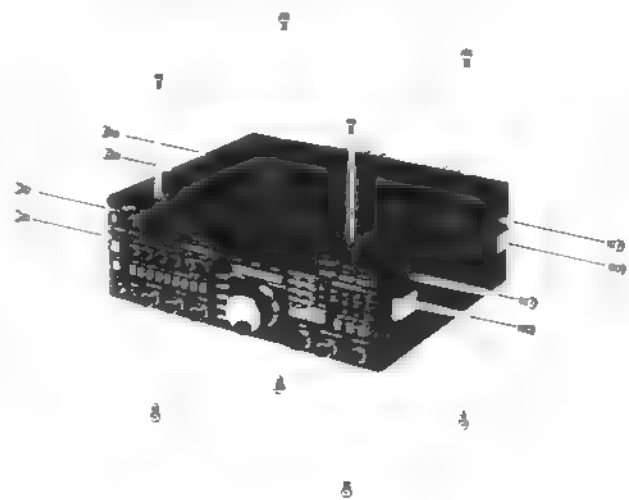
- (5) Replace the top cover and its eight screws.



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- (1) Remove all interconnections from the rear panel, and then remove the two screws in the carrying handle and eight screws affixing the covers. Remove the handle and covers, and place the transceiver left side up on the workbench.
- (2) Remove the six screws affixing the RX IF Unit at the left side of the chassis, and carefully fold the board away to allow access to the solder side.
- (3) Insert the four filter leads into their holes, and solder them into place (polarity is not important).
- (4) Move the jumper plug indicated below from the WI[ce] to the NA[rrow] pins.

- (5) Replace the RX IF Unit and its six screws (using care not to pinch any wires). If installing other options, proceed to the next paragraph. Otherwise, replace the covers and carrying handle, and their screws.



FVS-1 VOICE SYNTHESIZER INSTALLATION IN THE FT-736R

- (1) Remove all connections from the jacks on the rear panel, and then remove the two screws in the carrying handle and the eight screws affixing the top and bottom covers. Remove the handle and covers.
- (2) Loosen the two front panel mounting screws on each side, and fold the front panel down.
- (3) On the inside of the front panel behind the keypad, locate the unconnected 10-pin jack, and connect the FVS-1 here.

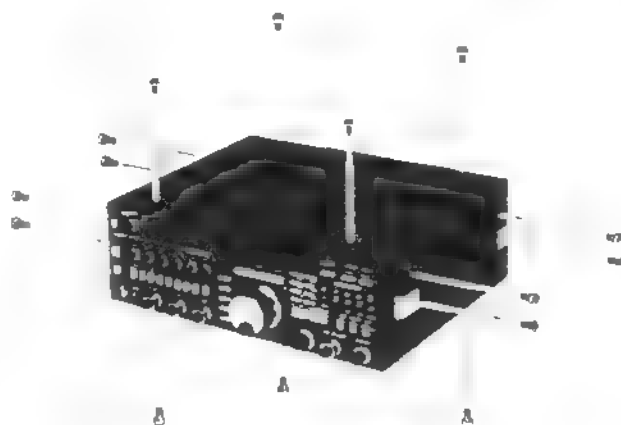
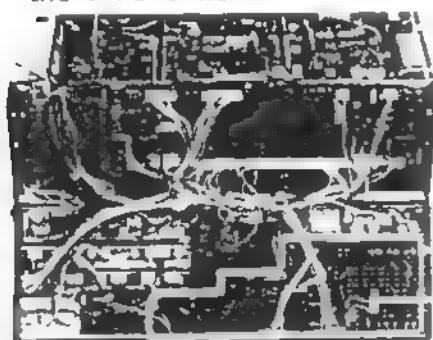
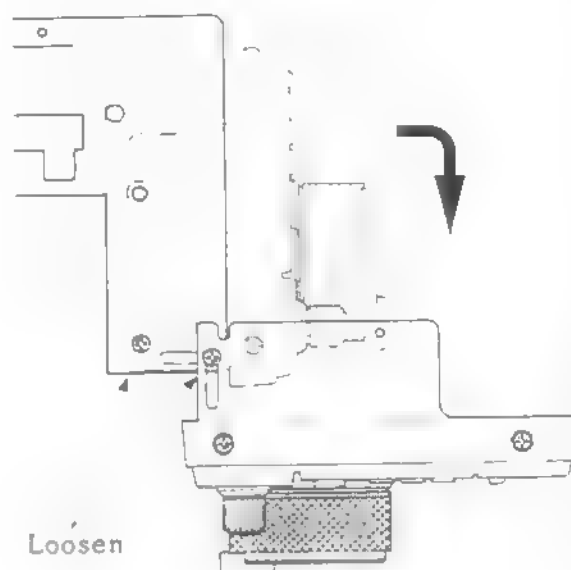


Figure 1



DISPLAY UNIT
10-pin jack

Figure 3



Loosen

Figure 2

- (4) Set the JA[panese]/EN[GLISH] switch on the FVS-1 to the desired position, and then affix the FVS-1 board into place using the double-sided adhesive tape on the flat surface of the FVS-1 IC.

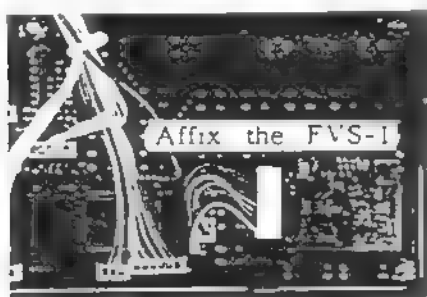
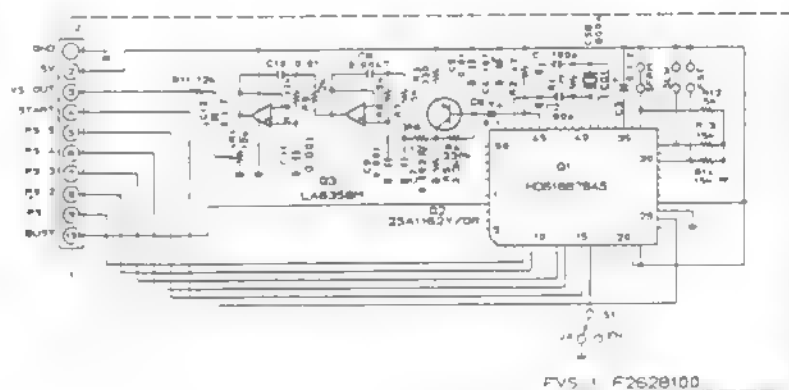


Figure 4



- (5) Fold the front panel back into place, tighten its screws, and replace the covers and carrying handle.



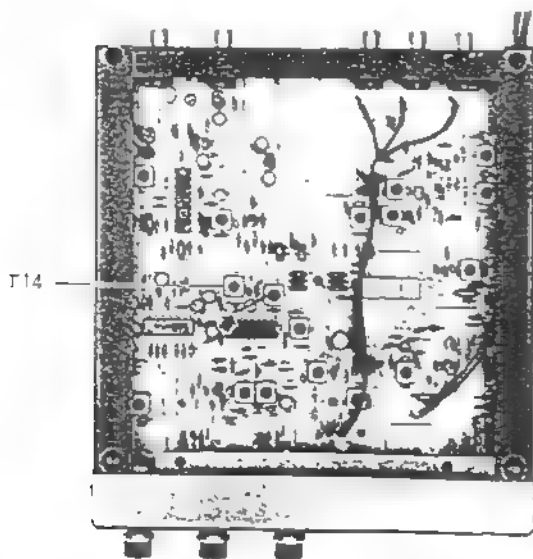
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YAESU TV-736 ATV MODULATOR/DEMODULATOR

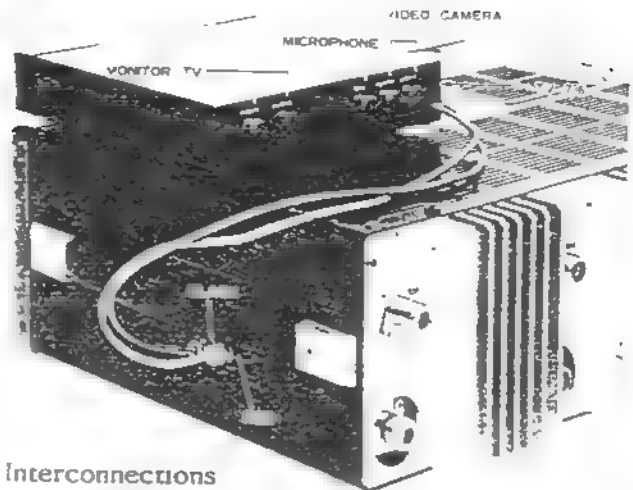
The TV-736 is a fast-scan television modulator/demodulator designed for use with the FT-736R Transceiver equipped with the optional 1.2 GHz Band Module. Black and white or color Amateur Television (ATV) reception is provided when an external video monitor is connected to the TV-736, and transmission is possible when an external video camera is connected. Double side-band (A3F) mode can be used either alone or with an FM audio subcarrier (F3E, selected by an internal jumper).

Emission Mode Selection

The TV-736 is set for the video+audio mode at the factory. For color transmission, this requires a total bandwidth of 9 MHz. If you want or need to transmit video without the FM subcarrier, remove the bottom panel (see "Bottom Panel Removal" on page 3) and connect the two halves of the (cut) jumper wire near T14 (shown below). Keep the bottom cover off for now.



Mode Select Jumper Location



Interconnections

Connect the two cables from the TV-736 to the FT-736R as shown above: the red plug connects nearest the rear of the transceiver.

If you have a video monitor or a TV with a baseband (composite) video input jack, connect the TV-736 VIDEO OUT jack to the monitor's video input jack using 75-ohm coaxial cable (peak video level is 1 Vp-p @75 ohms). If your TV has no video input jack, you will need to install a video modulator (not supplied by Yaesu) between the TV-736 and the TV's antenna jack.

Connect your camera's video output line to the TV-736 VIDEO IN jack. Camera output level should be 1 Vp-p @75 ohms impedance.

For audio subcarrier operation, connect your camera's audio output line to the TV-736 AUDIO IN jack. Audio output from the camera should be 500mV peak @600 ohms impedance. Also, connect TV-736 AUDIO OUT jack to the audio input of your monitor, or to an external audio amplifier. Audio output level is also 500mV peak @600 ohms.

If your camera does not have a microphone, or if you wish to connect another microphone (200 to 10k ohms), connect it to the MIC jack on the rear of the TV-736.

Operation

Before operating the TV-736 for the first time, the bottom cover must be removed to allow access to video input level trimmer VR04. See "Bottom Panel Removal".

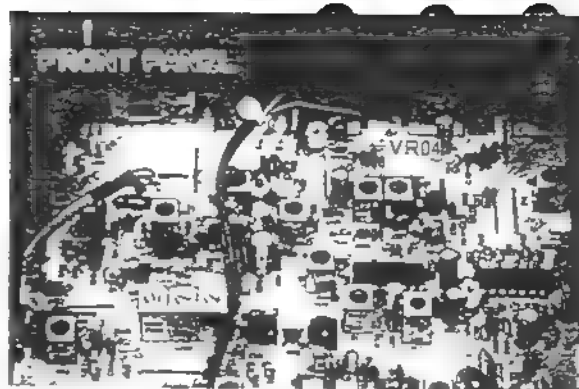
After selecting the mode of emission (video-only, or with audio) by the jumper described previously, and connecting your camera and monitor, switch on the transceiver and the TV-736 POWER switch.

Set the FT-736R to the 1.2 GHz band, and select either the FM or an SSB mode (operation is the same in these mode). Set the METER selector knob to the S/PO position.

With your camera still turned off, press the MOX button to transmit a carrier, and adjust the RF POWER control on the TV-736 so that the FT-736R meter deflects to "8" on the PO scale.

Now (while still transmitting) switch on the camera and adjust VR04 inside the bottom panel (see photo at right) for the desired contrast on the monitor.

The AUDIO control on the front panel of the TV-736 adjusts the audio level from the camera, if your camera includes a microphone and if it is connected to the AUDIO IN jack on the TV-736. The MIC control adjusts the audio level if a microphone is connected to the MIC jack on the TV-736.



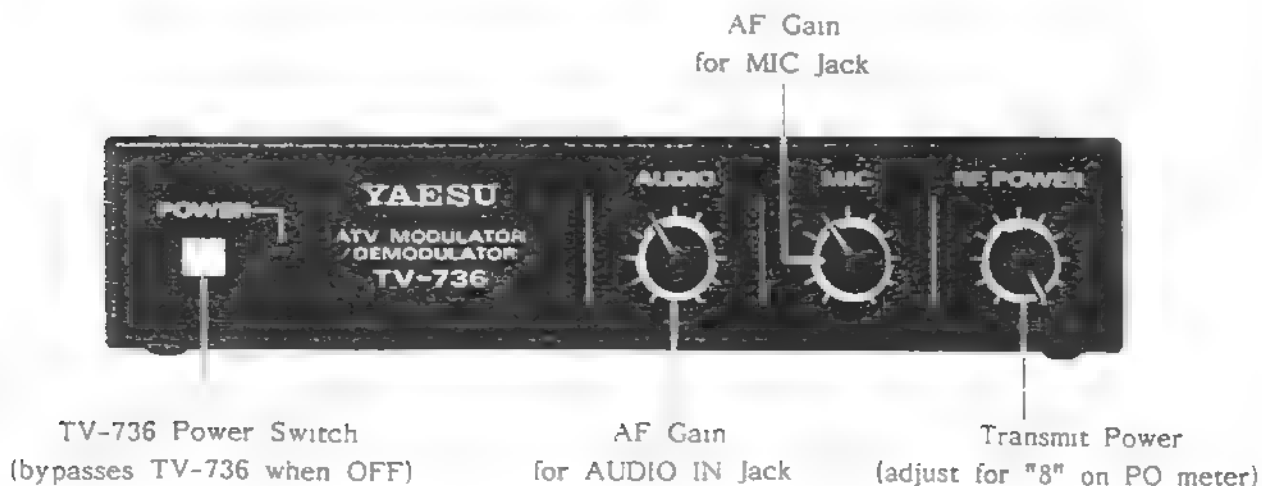
Video Input Level Adjustment

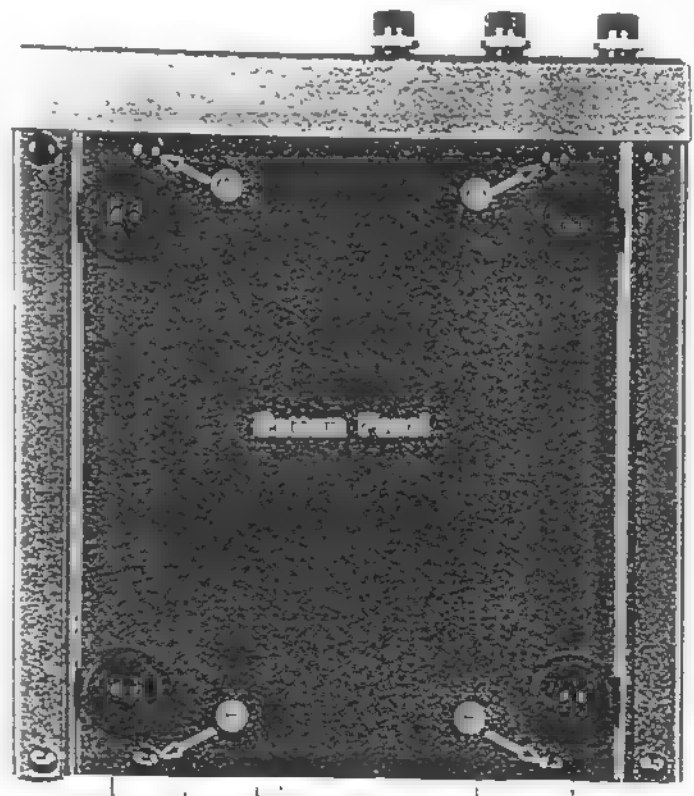
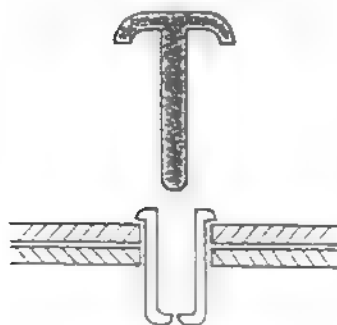
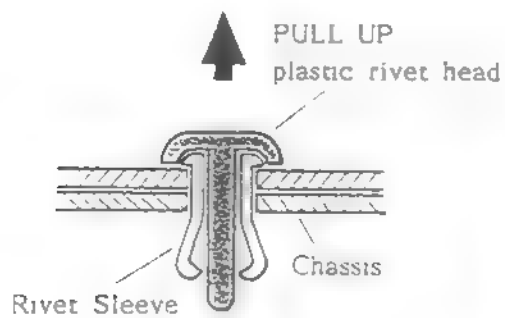
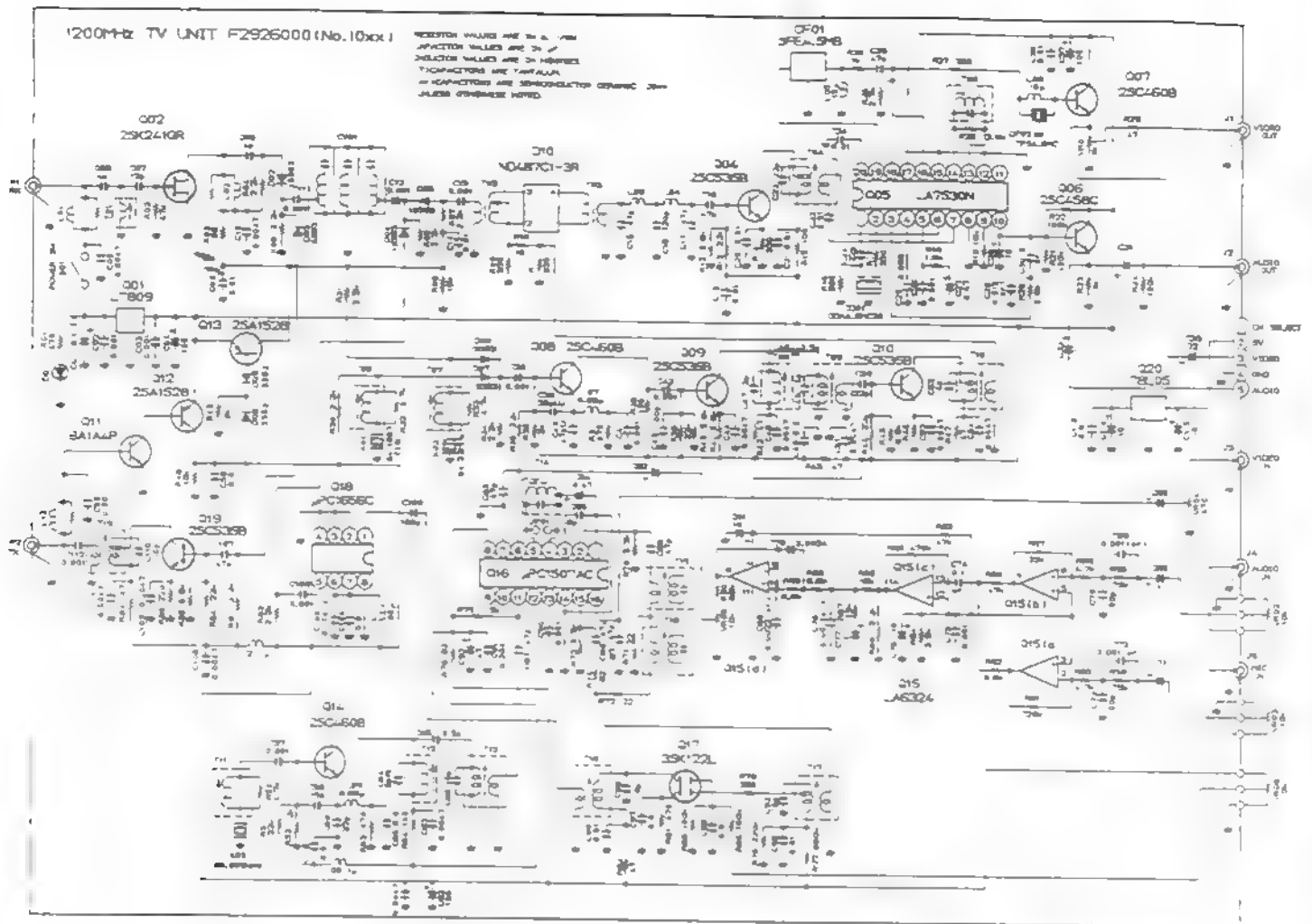
To receive, press the MOX button on the transceiver so that it returns to the undepressed position. Adjust the RF GAIN control, as necessary, for best picture.

NOTE: the DRIVE and MIC gain controls on the FT-736R are disabled when the TV-736 is operating. Just turn off the TV-736 POWER switch to operate the transceiver in other modes.

Bottom Panel Removal

The bottom panel of the TV-736 is secured by two plastic rivets at the front ("A" in the photo on the next page), and two screws ("B"). Pull the rivet pins all the way out to release them, and then remove the two screws. Replace the bottom panel after adjusting VR04 to obtain proper contrast with your camera.





SPECIFICATIONS

Operating frequency range:
1240-1300 MHz (w/FT-736R & FEX-736-1.2)

Modes of emission:
A3F, or A3F+F3E

Transmitter modulation method:
Amplitude Modulation

Video carrier output frequency (IF):
133.810 MHz

Audio carrier output frequency (IF):
138.310 MHz

Video and audio carrier stability:
 $\pm 10\text{ppm}$

Maximum audio (FM) deviation:
 $\pm 25\text{ kHz}$

Maximum total bandwidth:
9 MHz

Spurious emissions:
less than -50dB

Peak video input level:
1 Vp-p @75 ohms (typical)

Peak audio input level:
500 mVrms @600 ohms (typical)

Peak video output level:
1 Vp-p @75 ohms (typical)

Peak audio output level:
500 mVrms @600 ohms (typical)

Operating voltage:
13.8 VDC (from FEX-736-1.2 module)

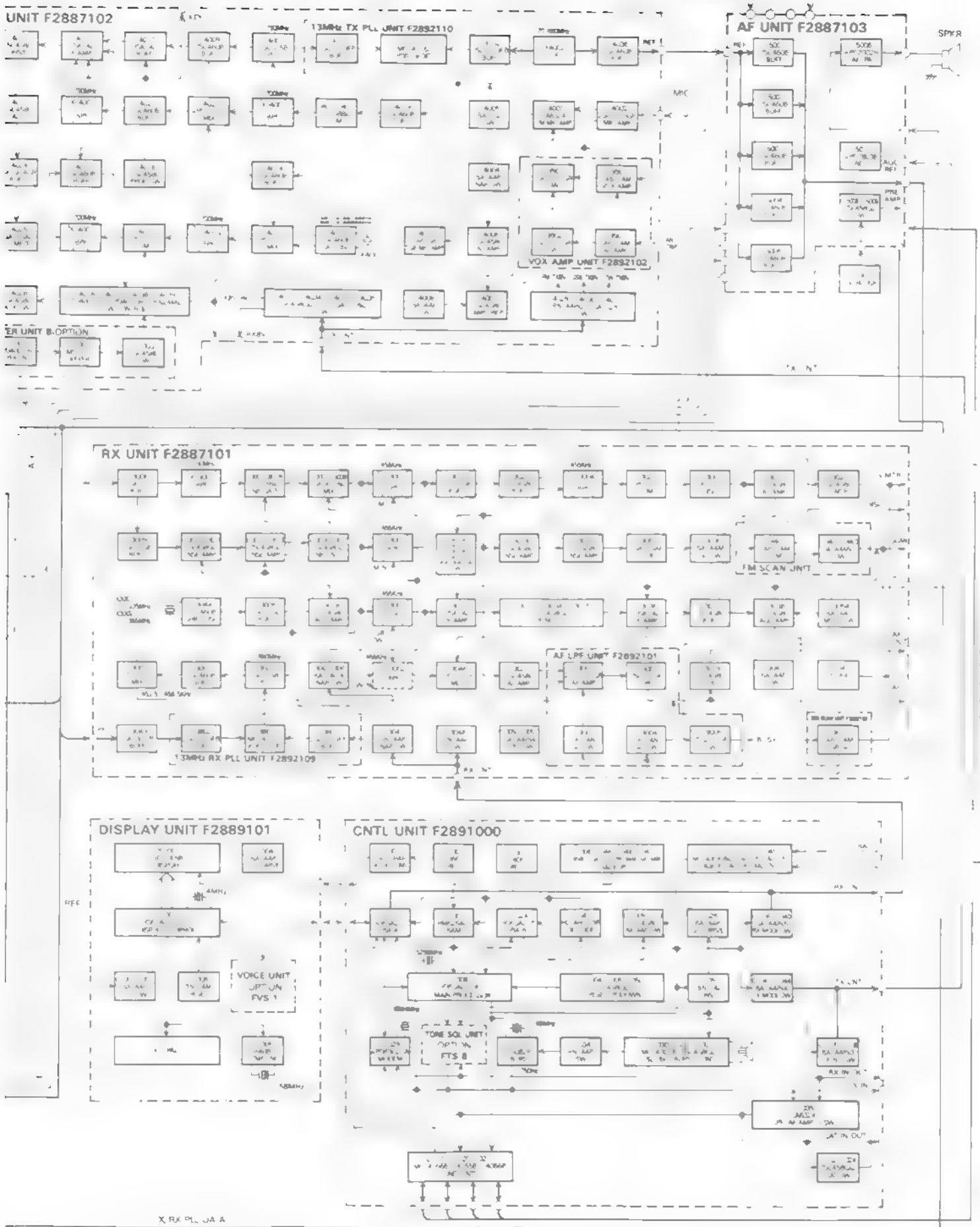
Operating temperature range:
0 to +40°C

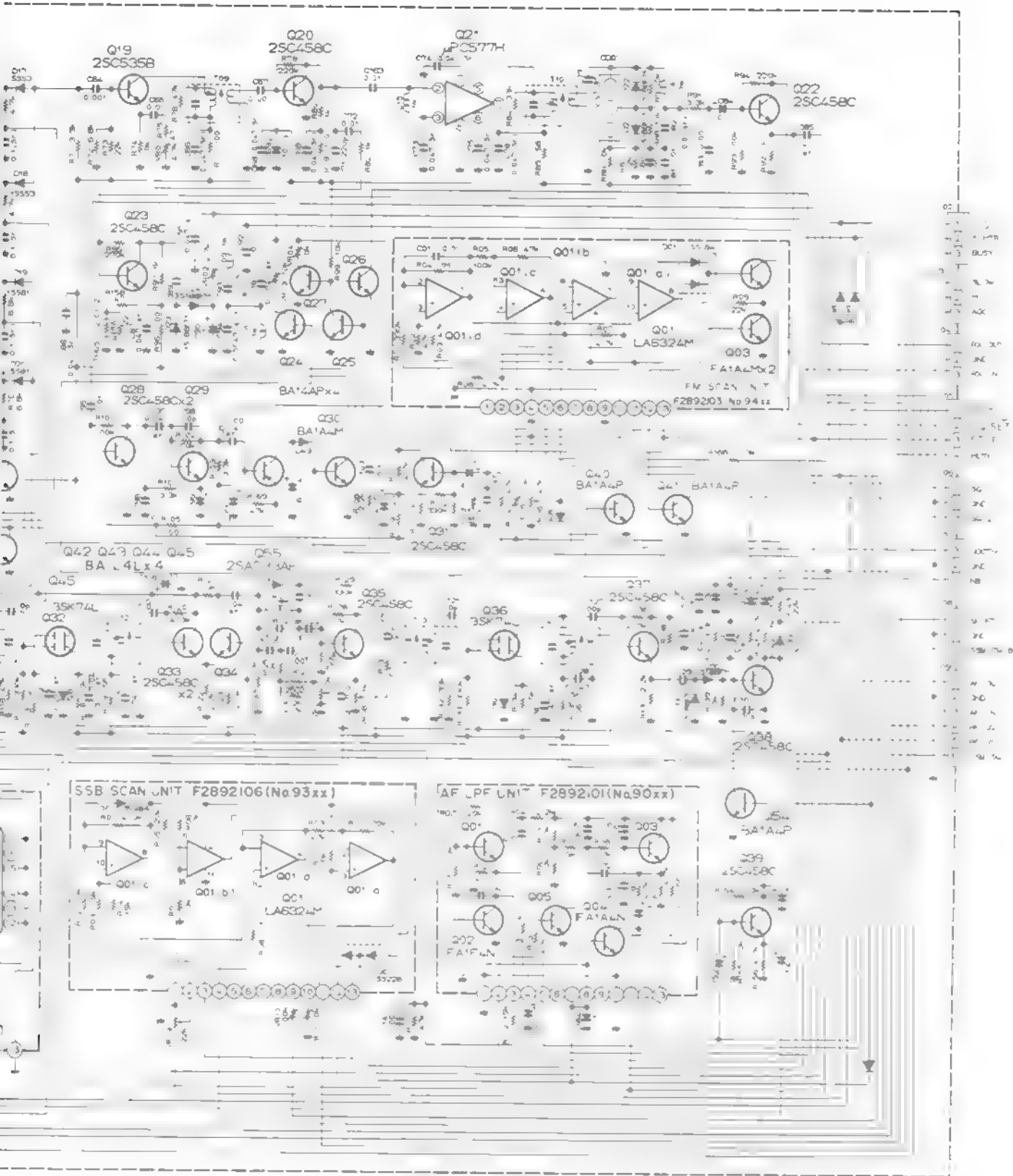
Size (WHD):
167 x 35 x 170.5mm

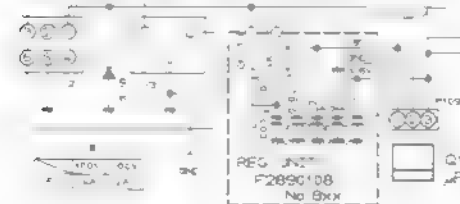
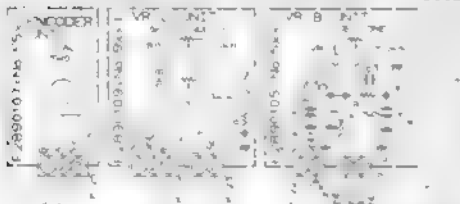
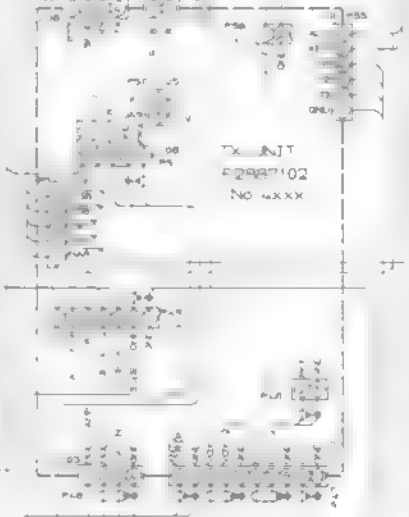
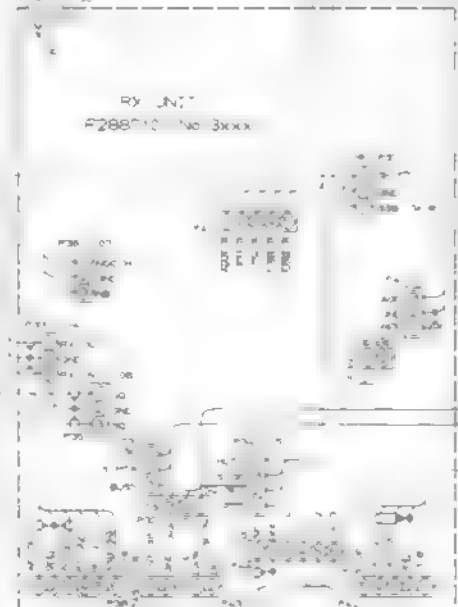
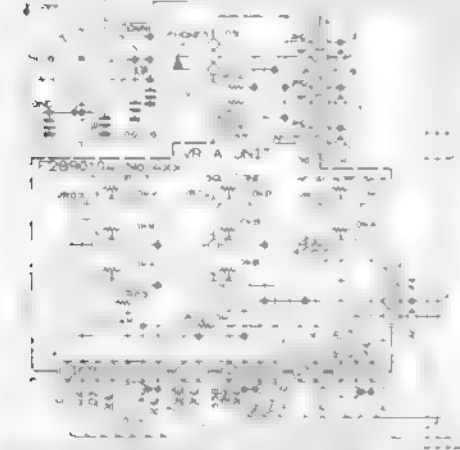
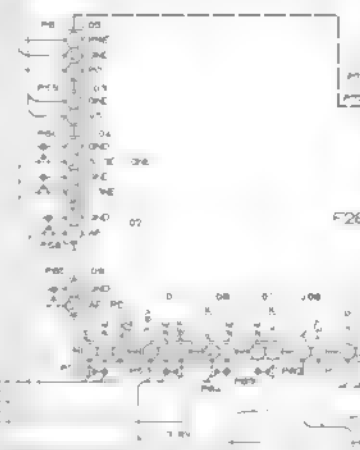
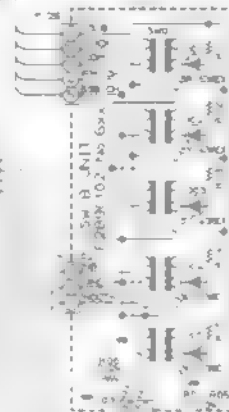
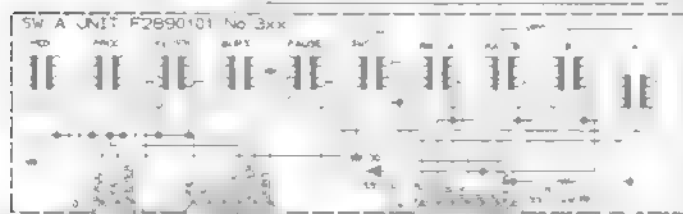
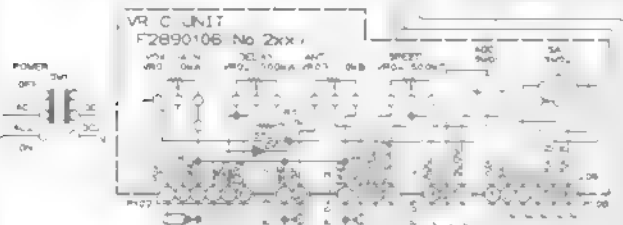
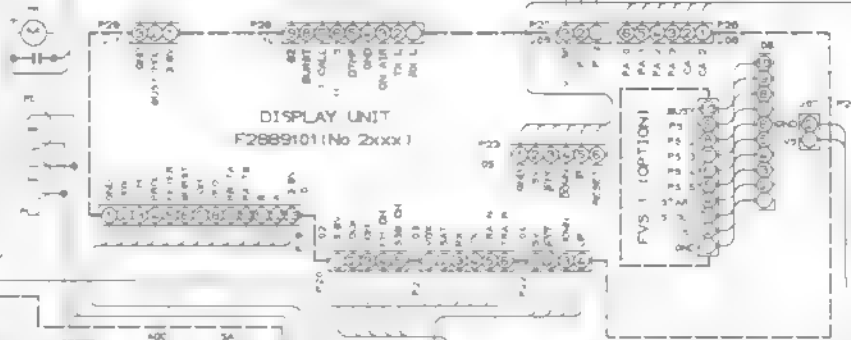
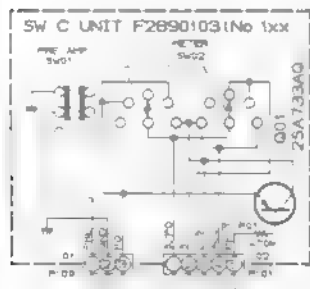
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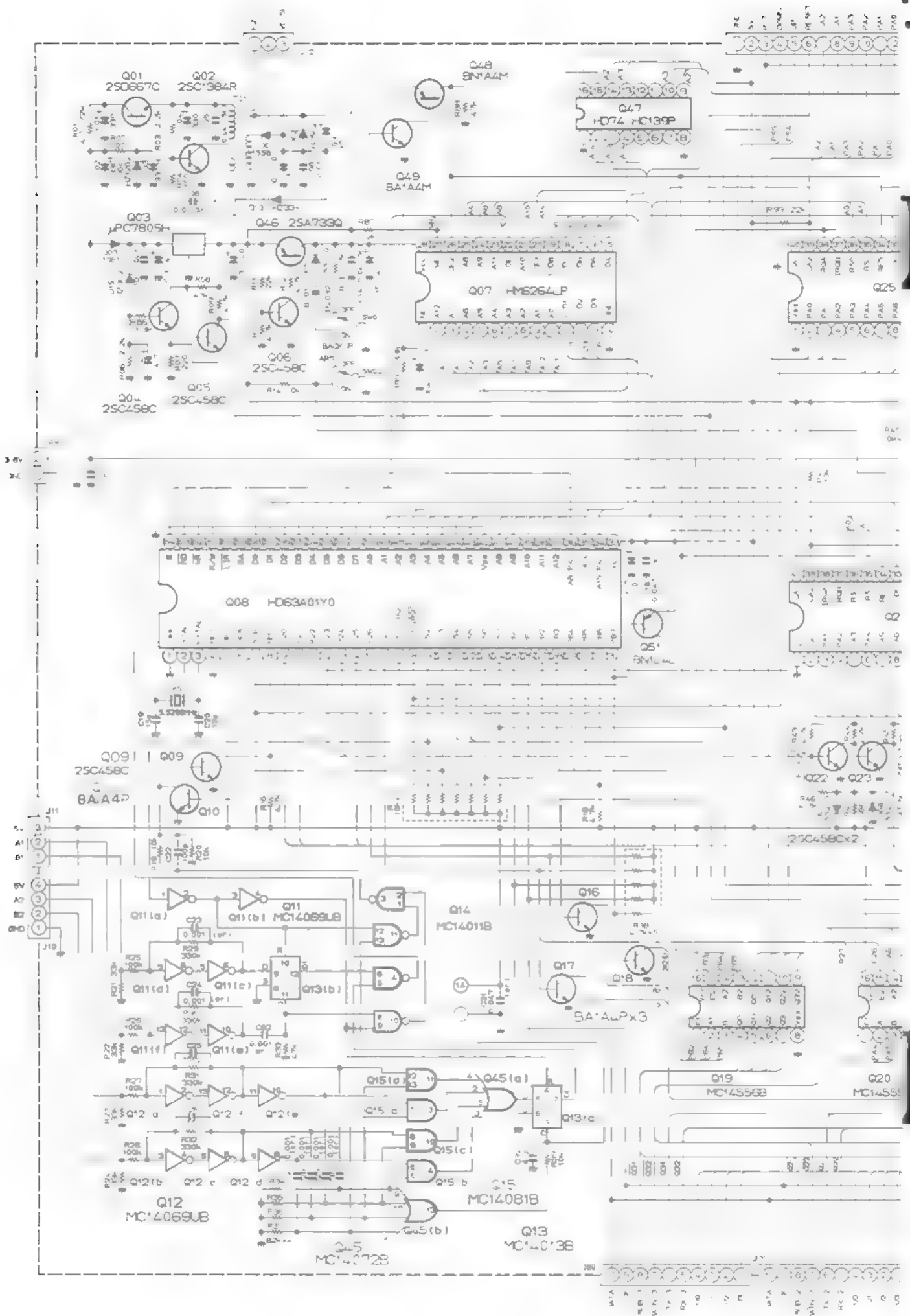


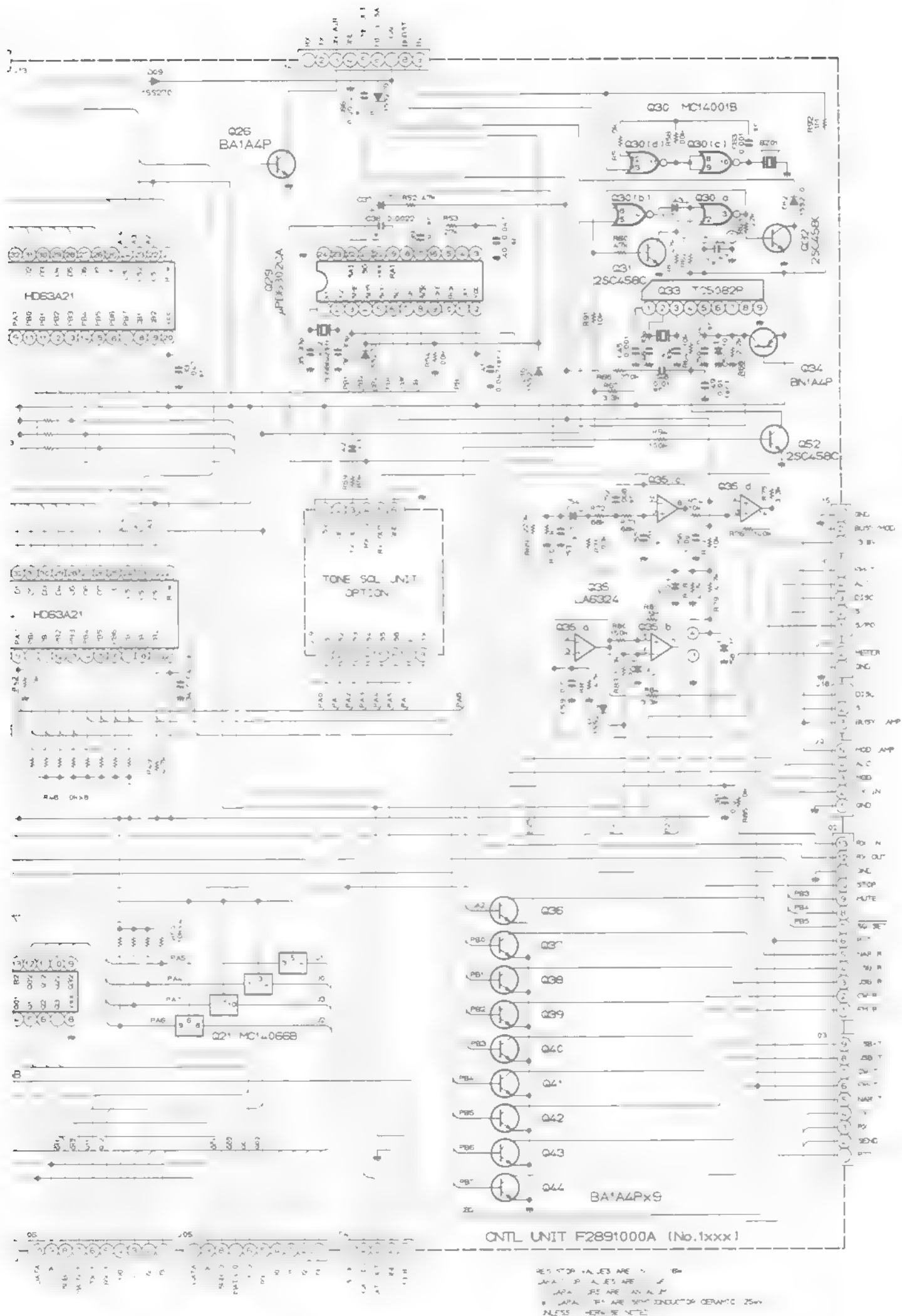
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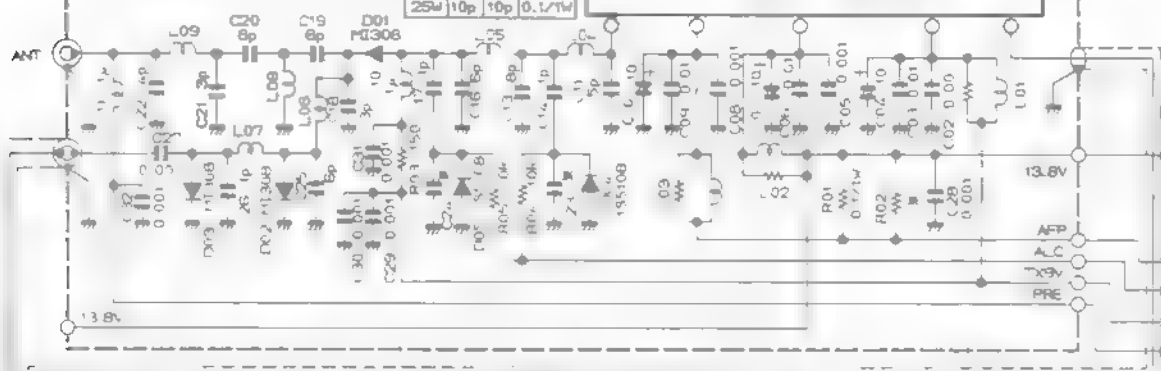


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JAL 30 ALES ARE 4
APL JES ARE 10 AL 3
B APAL F- ARE 500 INDUCTOR CERAMIC 25m
NLESS -EVA SE VICE

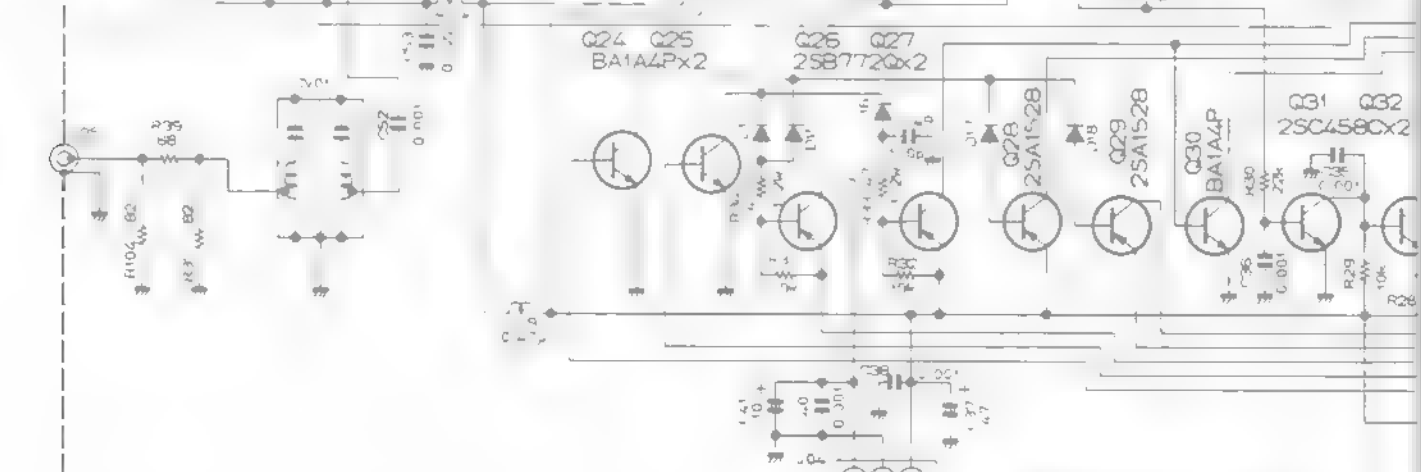
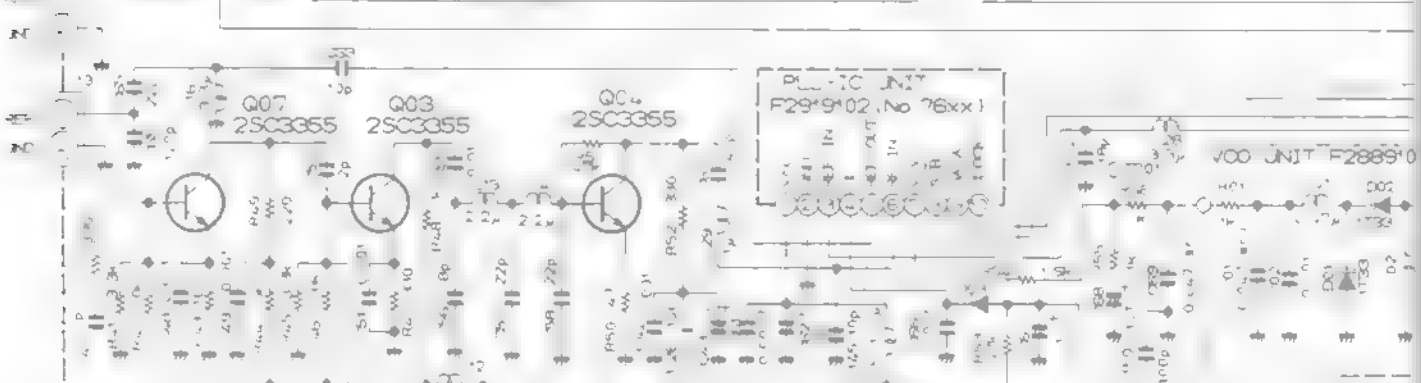
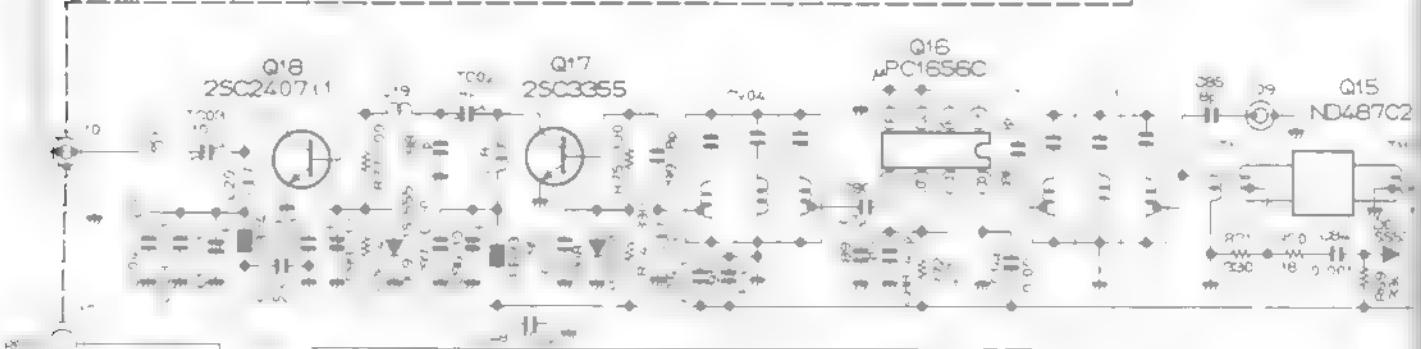
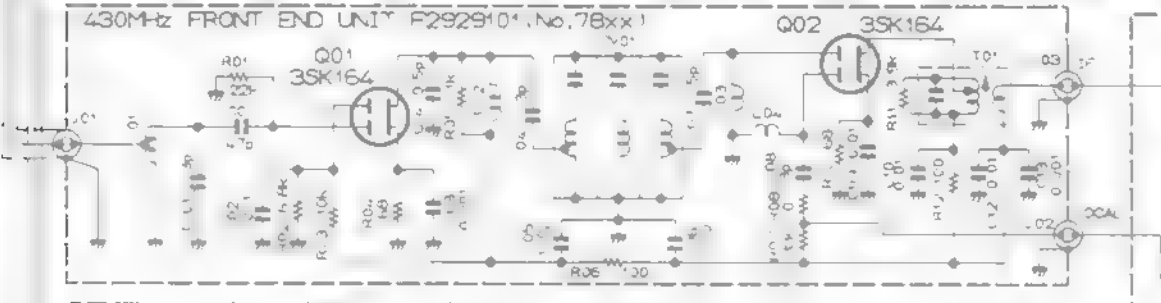
430MHz P A UNIT
F2887105 (No.75xx)

	C23	C24	R02
10W	6p	6p	—
25W	10p	10p	0.17W

Q01 10W : M57716
25W : M57745

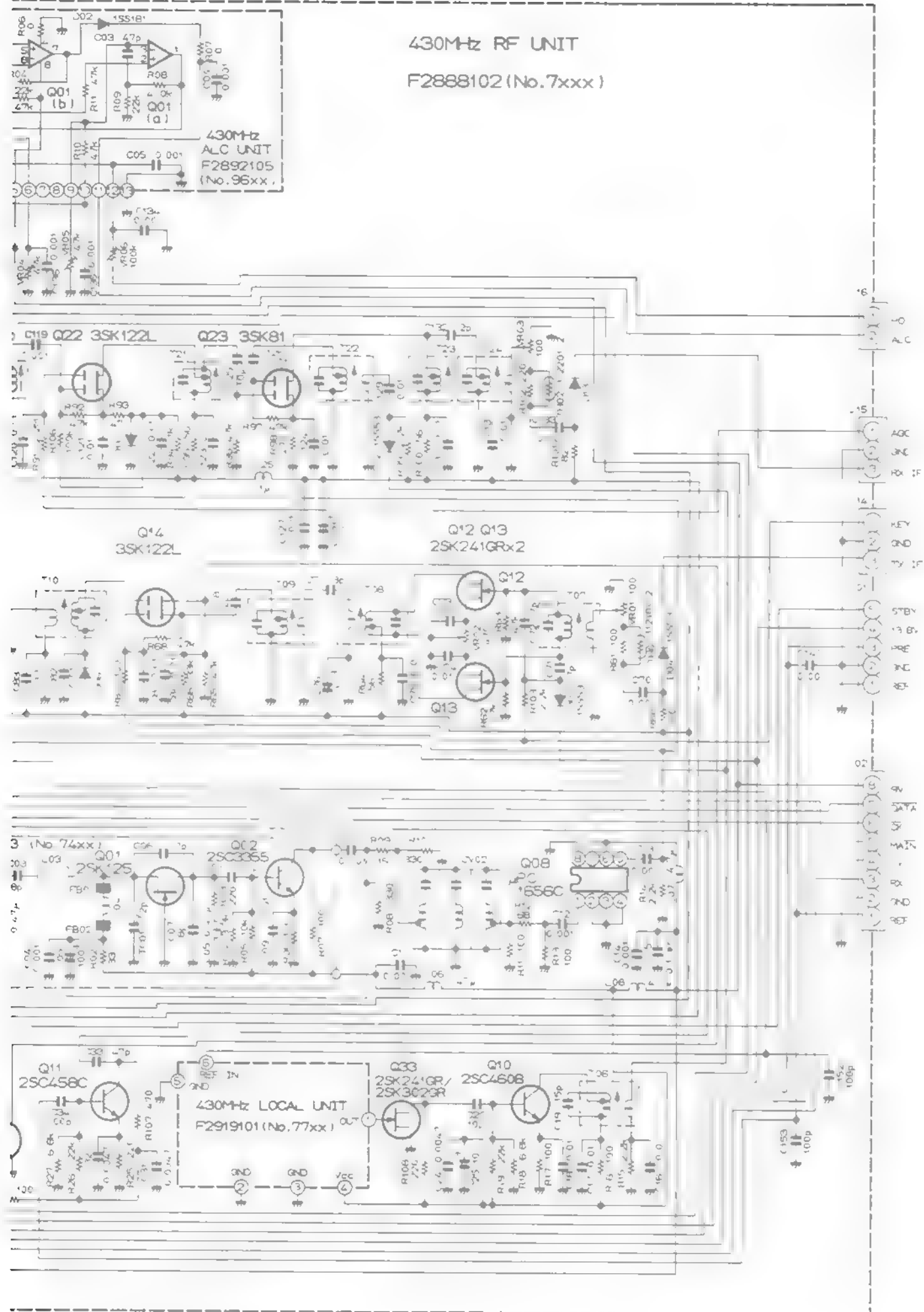


430MHz FRONT END UNIT F2929101 (No.78xx)



RESISTOR VALUES ARE IN Ω 1/W:
ON ACTOR VALUES ARE IN μ
INDUCTOR VALUES ARE IN HENRIES.

430MHz RF UNIT F2888102 (No.7xxx)

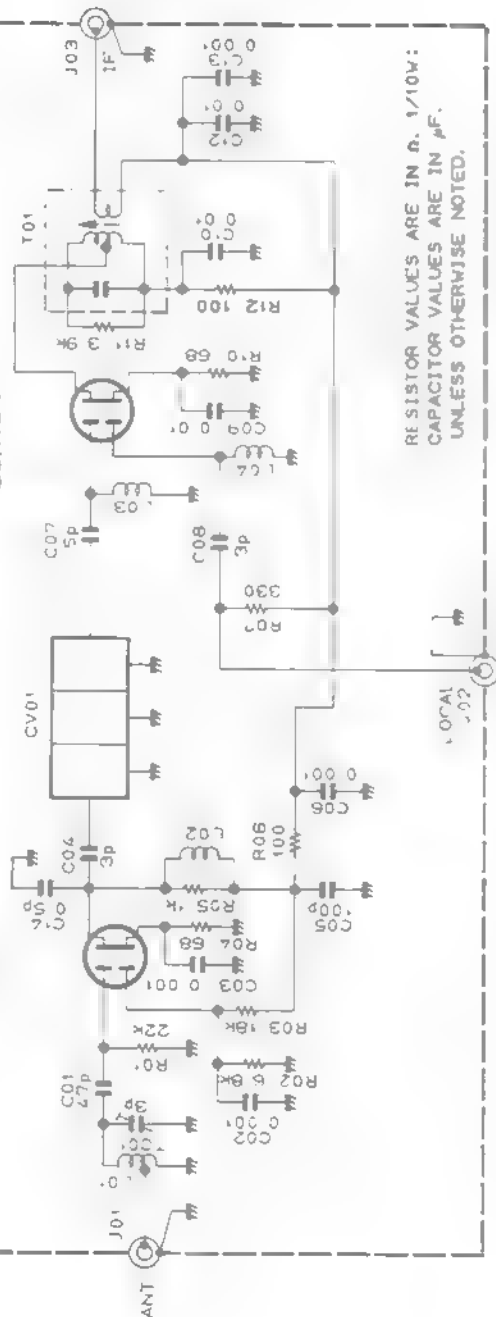


(1) CAPACITORS ARE TANTALUM.
DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED

430MHz FRONT END UNIT F2929100 (No.78xx)

Q01
3SK164

Q02
3SK164



RESISTOR VALUES ARE IN Ω , 1/10W;
CAPACITOR VALUES ARE IN μ F.
UNLESS OTHERWISE NOTED.

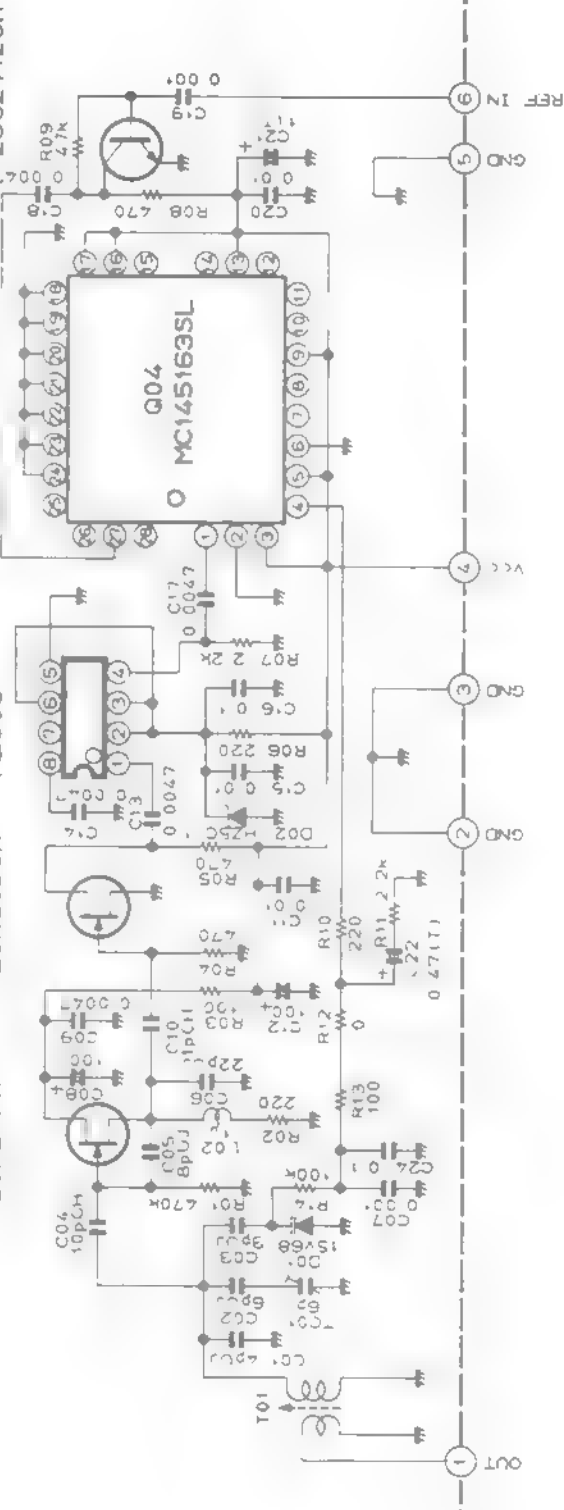
430MHz LOCAL UNIT F2919101 (No.77xx)

Q01
2SK210GR

Q02
2SK302GR

Q03
MB503

Q05
2SC2712GR



RESISTOR VALUES ARE IN Ω , 1/10W;
CAPACITOR VALUES ARE IN μ F;
INDUCTOR VALUES ARE IN HENRIES;
IT, CAPACITORS ARE TANTALUM
UNLESS OTHERWISE NOTED.

RESISTOR VALUES ARE IN Ω , 1/5W.
CAPACITOR VALUES ARE IN μ F.
INDUCTOR VALUES ARE IN HENRIES;
IT, CAPACITORS ARE TANTALUM.
IT, CAPACITORS ARE SEMICONDUCTOR CERAMIC 25WV.
UNLESS OTHERWISE NOTED

144MHz P A UNIT F2887104 (No.65xx)

	C23	C24	R02
10W	8p	8p	—
25W	10p	10p	0.1/1W

Q01 10W : M57713
25W : M57721

144MHz ALC (F2892104 (No.

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

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Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

Q01(b) 5

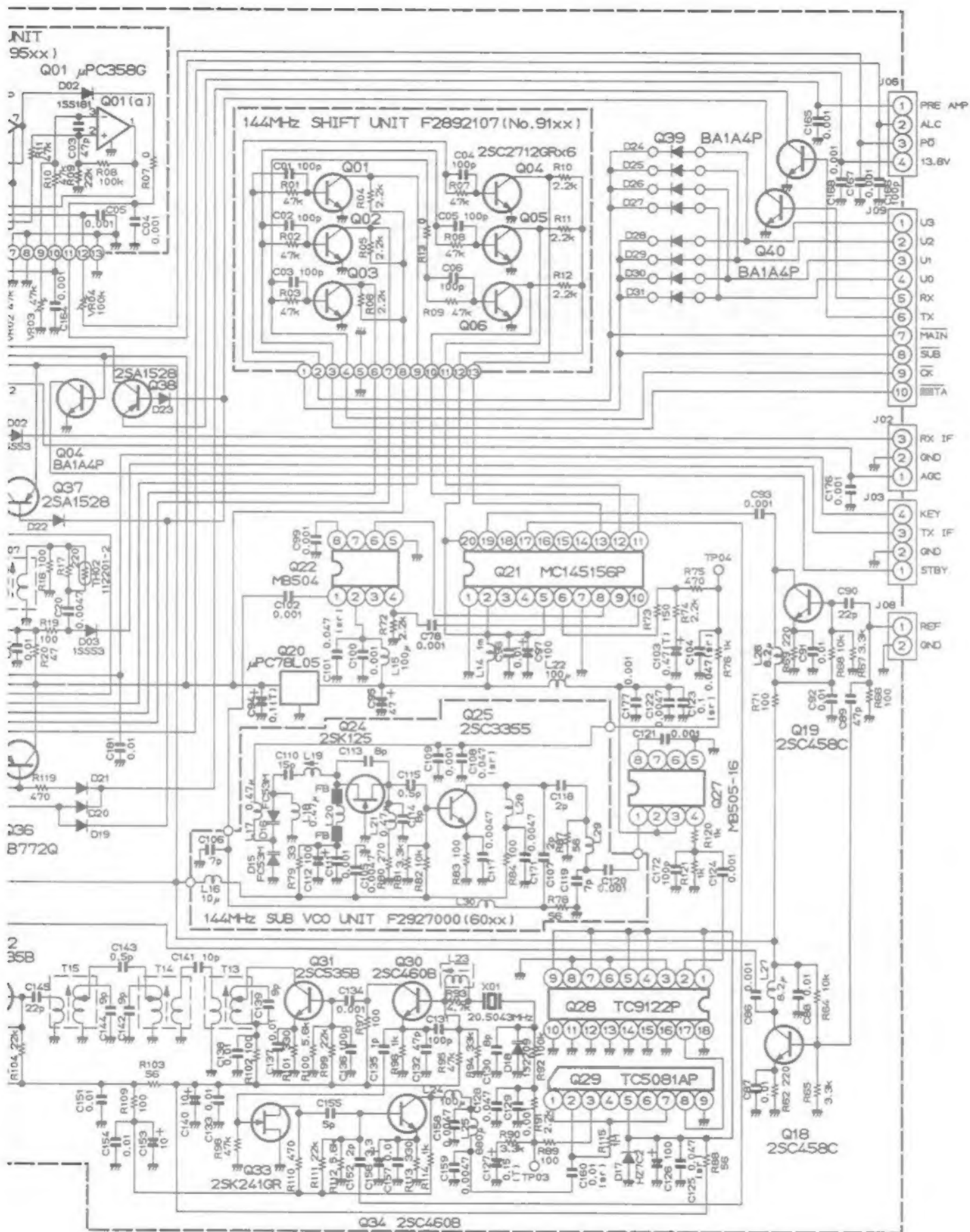
Q01(b) 5

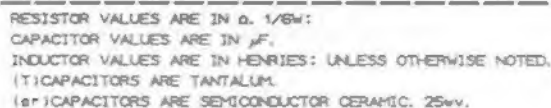
Q01(b) 5

144MHz MAIN UNIT F2888101 (No.6xxx)

RESISTOR VALUES ARE IN Ω , 1/10W;
CAPACITOR VALUES ARE IN μ F.
INDUCTOR VALUES ARE IN HENRIES.
UNLESS OTHERWISE NOTED.

DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.
(T) CAPACITORS ARE TANTALUM.
(μ) CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25Vv;





Q01 2SC535B

13MHz TX PLL UNIT F2892110 (No. 97xx)

